TOSHIBA
Leading Innovation

# Success based on quality.

LED Product catalogue 11/2014

E-CORE™
LED Lighting

## Lighting increases a sense of security and well being

Light is malleable and can therefore be varied according to our needs and our environment. Light enables us to plan by being a solution in itself for even the most tailored requirements - whether traditional or innovative, practical or emotional. Toshiba has been producing lighting for over 120 years. With our wide range of products, we offer the optimal solution for perfect light.

Our LED lamps and luminaires meet the highest standards thanks to their efficiency and functionality as well as their outstanding aesthetics.

**Be inspired by this product brochure with the many ways to achieve your lighting solution.**



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E-CORE LED Lighting

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# A 120 year history of success

- VERY LOW COLOUR TOLERANCE
- EXTREMELY LONG LIFETIME
- NO HEAT IN BEAM
- EXTREMELY LOW POWER CONSUMPTION
- HARMONIOUS LIGHT COLOURS
- NO UV OR IR RADIATION
- LEAD AND MERCURY-FREE
- INSTANT QUALITY LIGHT
- DIMMABLE* BETWEEN 10 AND 100%

## Lighting technology from Toshiba

**1875**
Hisashige Tanaka founded the company Tanaka Engineering Works (Tanaka Seizo-sho), which was later renamed Shibaura Engineering Works (Shibaura Seisaku-sho).

**1890**
Ichisuke Fujioka founded the company Hakunetsu-sha & Co. Ltd., Japan‘s first incandescent lamp factory. It produced carbon filament lamps.

**1899**
Renamed Tokyo Electric Company (Tokyo Denki).

**1939**
Merger of the Tokyo Electric Company and Shibaura Engineering Works Co. Ltd. (Tanaka Seisaku-sho) in Tokyo Shibaura Electric Co. Ltd. - In short, Toshiba.

**1940**
Production of Japan‘s first fluorescent lamp.

**1980**
Production of the world‘s first compact bulb-shaped fluorescent lamp - the "NeoBall" - characterised by its low energy consumption rate.

**2007**
Development of the E-CORE LED Downlights - with a lamp life of over 40,000 hours. LED becomes a universal means of lighting.

**2008**
Toshiba‘s Environmental Vision 2050 seeks to harmonize the environment with a better future for people. Toshiba Lighting therefore announces the termination of the production of conventional light bulbs in 2010.

**2009**
Production E-CORE LED Lamp: LED enters a new market by becoming compliant with classical lamps.

**2010**
March 2010: termination of the production of incandescent light bulbs.

**2012**
Expand further in the european market thanks to a fixture line-up covering commercial lighting applications.

**2014**
Toshiba Lighting takes accent illumination one step further: the NEOACCENT Shoplights integrate perfectly into different indoor architecture and enable an optimized heat management.

* Trailing edge dimmer; Compatibility list at www.toshiba.eu/lighting

E-CORE LED Lighting

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# Toshiba's environmental vision for 2050

## "Improving our global eco-efficiency by 2050"

**Do you believe it? At Toshiba, we do.**

We are convinced that economy compliments ecology and that each corporation is responsible for the economical, social and environmental issues of its products.

One of many examples: after years of hard work, our LEDs use up to 80 % less energy than incandescent lamps.

Environment is our priority.

Welcome to Toshiba.

TOSHIBA eco style



## LED: 3 letters for 1 solution

With such ambitious goals, Toshiba Lighting had to find means to produce much better light bulbs than incandescent and halogen lamps. This aim combined with economic and environmental issues: we blazed our path to the solution.

In the 70's, an LED was used as a coloured indicator or warning lights.

In 1996, we obtained white light LEDs.

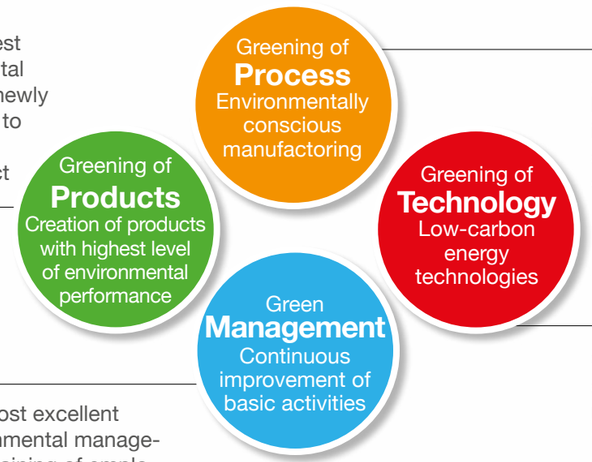
Today LEDs light large areas like museums, public places and parks to houses.

We began developing LEDs in the very early stages of the technology as we saw its potential for vast energy savings and long life. It was a gamble that we are now seeing a return on many years later. A true sign of our commitment to this innovative technology.

## The four "Greens" and the management supporting them

Achieving the highest level of environmental performance in all newly developed product to reduce life-cycle enviromental impact

Aiming to be the most excellent company in environmental management through the training of employees and continuous improvement in environmental communications




Achieving one of the world's lowest levels of environmental impacts by reducing all manufacturing-related environmental impact

Contributing to provision of a stable power supply and mitigation of climate change through the low-carbon energy technologies

E-CORE LED Lighting

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# Who else but Toshiba!

## Toshiba Lighting makes history

Back in 2008, we announced that we anticipated the end of the production of conventional incandescent lamps by 2010. And, as it happens we were right - with production completely shut down in 2010. Toshiba Lighting sees itself as the brand that researches, develops and manufactures with man and the environment in mind.

We have given a name to this consistent thought and action: Akari. Focus on the needs of people as well as thinking and acting sustainably. This is the driving force behind Toshiba‘s continuous innovation processes.

This shapes Toshiba E-CORE LED products and makes them unique and exemplary. Exemplary in: operating life, energy consumption, reduction of CO2 emissions by 80 % compared to conventional incandescent lamps, the range of the performance and colour spectrum and the resulting application possibilities. „Leading Innovation“ - in no other area is this claim of Toshiba more directly experienced than here.

## E-CORE LED Lighting, your partner for the future

From the beginning, E-CORE LED Lighting was praised by a large public composed of retailers, professionals, architects and end users, as its 73% growth over last year shows.

Whether it be „a light to see“ for your general lighting or a „light accent“ for your shop displays, E-CORE LED Lighting will meet your needs.

Let’s discover our catalogue for 2014/15.
Just follow the light.

## Why does everybody choose E-CORE LED Lighting?

Last year, hundreds of thousands of professionals and customers from the whole world chose our LEDs. How can we explain such a success?
Let’s ask them!

- Our LEDs last up to 60,000 hours without any maintenance
- Our LEDs use up to 80 % less energy than incandescent lamps
- Our LEDs withstand shock and vibration
- Our LEDs generate virtually no ultraviolet and no infra red
- Our LEDs can reduce CO2 emissions by 80 % compared to incandescent lamps
- Generate less heat thereby contributing towards lower air-conditioning costs
- A very wide range with many sizes and colours offering new creative opportunities

## A very wide range for many different needs

With E-CORE LED Lighting, Toshiba wants to make as many people as possible benefit from its progress. For many years, our engineers worked altogether to develop our LED technology.

We are very demanding with ourselves in order to reach one goal: Answer all your lighting needs.

This catalogue is made for you.
Read it carefully: the future is under your eyes.

E-CORE LED Lighting

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# INDUSTRIAL

## Lighten up your work

For industrial companies in particular, vision is key. That‘s why it‘s all the more important to use robust, high-performance light sources – such as Toshiba industrial lighting fixtures. They meet international standards and exceed your expectations. That‘s because they are durable, energy-efficient and low-maintenance, making them the most reliable industrial lighting fixtures of our time.

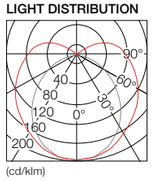
## E-CORE LED WEATHERPROOF 2

The name says it all: designed to IP65, this robust diffuser luminaire is the ideal lighting solution for all areas with particular climatic or functional requirements. It is a replacement for T8 Lamp installations in warehouses, underground car parks, cold stores and other similar situations.

**FEATURES**

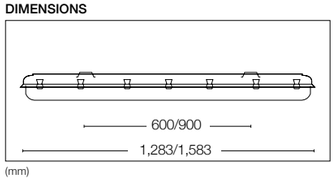
- Applicable lamp: E-CORE LED TUBE GX16t-5
- Dimmable: No (DALI dimmable on request)
- Electrical class: II
- Protection rating: IP65
- Power factor: > 0.9

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

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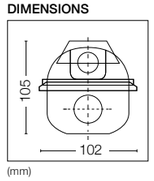
**DIMENSIONS**



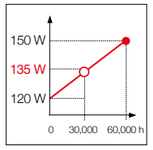

(mm)

| | COVER | COLOUR TEMPERATURE | LUMINOUS FLUX | GLOW WIRE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|
| **NEUTRAL WHITE** | | | | | | | | |
| LEDEUP00003S40 | PC | 4000 K | 2,760 lm | 850 °C | 32 W | 220 - 240 V | 80 | 40,000 h |
| LEDEUP00005S40 | | | 3,320 lm | | 40 W | 220 - 240 V | 80 | 40,000 h |
| LEDEUP00007S40 | PMMA | | 2,930 lm | 650 °C | 32 W | 220 - 240 V | 80 | 40,000 h |
| LEDEUP00009S40 | | | 3,550 lm | | 40 W | 220 - 240 V | 80 | 40,000 h |

## E-CORE LED HIGHBAY 12000

Extremely robust, absolutely homogeneous and very efficient - the E-CORE LED HIGHBAY 12000 stands for up-to-date industrial lighting. With a luminous flux of ~11,000 lm, good light quality and UGR 20 and UGR 26 this tough luminaire is ideal for illuminating different functional areas. The E-CORE LED HIGHBAY is a suspended fixture for any use where robustness and long life time is a must.

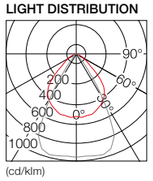
**CONSTANT LUMEN OUTPUT**




**FEATURES**

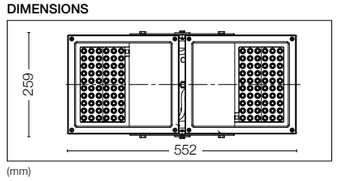
- Dimmable: No
- Electrical class: I
- Protection rating: IP65
- Power factor: 0.95
- Temperature range: -20 °C – +35 °C
- Constant lumen output (can be switched off if required)

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

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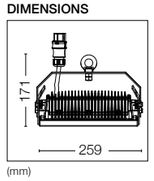
**DIMENSIONS**

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| | COLOUR TEMPERATURE | LUMINOUS FLUX | UGR | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN |
|---|---|---|---|---|---|---|---|---|
| **NEUTRAL WHITE** | | | | | | | | |
| LEDEUJ00005I40 | 4000 K | • 8,470 lm | ≤ 28 | 91° | 135 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUJ00006I40 | | • 8,663 lm | ≤ 22 | 60° | | 220 - 240 V | 80 | 60,000 h |
| LEDEUJ00005I50 | 5000 K | • 10,680 lm | ≤ 28 | 91° | 135 W | 220 - 240 V | 70 | 60,000 h |
| LEDEUJ00006I50 | | • 10,625 lm | ≤ 22 | 60° | | 220 - 240 V | 70 | 60,000 h |

E-CORE LED Lighting

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# Outdoor

## Go with safety

No one likes to be in dark parking lots or on unlit roads. Yet, for cost reasons, many cities practice the nightly shutdown of street lighting or the sparse lighting of car parks and public facilities.

This need not be so. Toshiba offers absolute cost-efficiency with energy-efficient outdoor lighting, a very long life and excellent design. Toshiba outdoor lighting - making cities user-friendly.

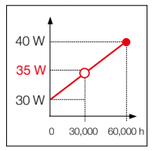
## E-CORE LED FLOODLIGHT 3000

Night-time lighting of buildings and other structures is a standard element of urban spatial design. This pivoting facade spotlight is the suitable tool for the job. Unbreakable, long-lasting and with an impressively uniform light output, it makes modern architectural lighting a reality. In figures, this represents upto 2,880 lumen at a power consumption of just 35 W and a nominal service life of 60,000 hours.

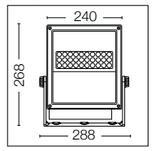
**FEATURES**

- Dimmable: No / Yes (CLO)
- Electrical class: II
- Protection rating: IP65
- Power factor: 0.9
- Temperature range: -20 °C – +35 °C
- Constant lumen output (can be switched off if required)
- ENEC

**CONSTANT LUMEN OUTPUT**




**DIMENSIONS**

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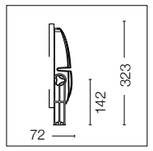
**DIMENSIONS**

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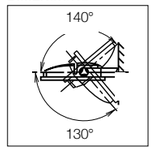
**DIMENSIONS**




(mm)

| | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | IK | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUF00019I30N | Silver | 3000 K | 2,015 lm | Narrow - 11° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00020I30N | | | 1,860 lm | Middle - 25° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00021I30N | | | 1,845 lm | Wide - 43° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00022I30N | | | 1,775 lm | Asym - 58° x 127° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUF00019I40N | Silver | 4000 K | 2,015 lm | Narrow - 11° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00020I40N | | | 1,860 lm | Middle - 25° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00021I40N | | | 1,845 lm | Wide - 43° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00022I40N | | | 1,775 lm | Asym - 58° x 127° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00019I50N | | 5000 K | 2,880 lm | Narrow - 11° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00020I50N | | | 2,655 lm | Middle - 25° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00021I50N | | | 2,640 lm | Wide - 43° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00022I50N | | | 2,540 lm | Asym - 58° x 127° | 07 | 30 - 40 W | 220 - 240 V | 80 | 60,000 h |

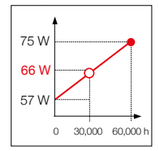
## E-CORE LED FLOODLIGHT 5500

The swivelling architecture light called the E-CORE LED FLOODLIGHT 5500 ensures impressive, bright and thus very cost-effective lighting. You enjoy tremendous flexibility with your light design thanks to the large choice of lumen packages, three different colour temperatures and various beam angles. Furthermore, the constant luminous flux control over the entire operational life offers unvarying brightness.

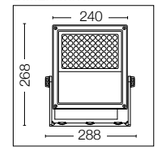
**FEATURES**

- Dimmable: No / Yes (CLO)
- Electrical class: II
- Protection rating: IP65
- Power factor: 0.9
- Temperature range: -20 °C – +35 °C
- Constant lumen output (can be switched off if required)
- ENEC

**CONSTANT LUMEN OUTPUT**




**DIMENSIONS**

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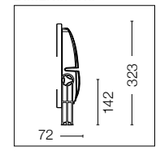
**DIMENSIONS**

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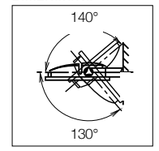
**DIMENSIONS**




(mm)

| | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | IK | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUF00023I30N | Silver | 3000 K | 4,035 lm | Narrow - 11° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00024I30N | | | 3,720 lm | Middle - 25° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00025I30N | | | 3,695 lm | Wide - 43° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00026I30N | | | 3,555 lm | Asym - 58° x 127° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUF00023I40N | Silver | 4000 K | 4,035 lm | Narrow - 11° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00024I40N | | | 3,720 lm | Middle - 25° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00025I40N | | | 3,695 lm | Wide - 43° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00026I40N | | | 3,555 lm | Asym - 58° x 127° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00023I50N | | 5000 K | 5,760 lm | Narrow - 11° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00024I50N | | | 5,315 lm | Middle - 25° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00025I50N | | | 5,280 lm | Wide - 43° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |
| LEDEUF00026I50N | | | 5,080 lm | Asym - 58° x 127° | 07 | 57 - 75 W | 220 - 240 V | 80 | 60,000 h |

E-CORE™ LED Lighting

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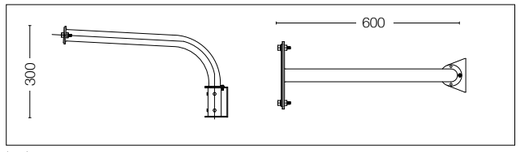
## Accessories for E-CORE LED FLOODLIGHT 3000/5500

These practical accessories are the perfect complement to the LED Floodlight 3000 and 5500 models. The ground spike is designed for securing the LED Floodlight to the ground, and provides a secure and stable support for all applications close to the ground. The wall-mounting boom is the ideal solution for securing the LED Floodlight to facades or buildings. With this boom, the LED Floodlight can easily be offset from walls at a 60 cm distance, providing perfect illumination. Both accessories are available in white or silver.

**WALL MOUNTING ARM - DIMENSIONS**

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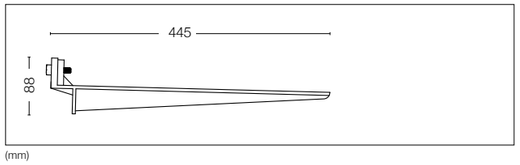
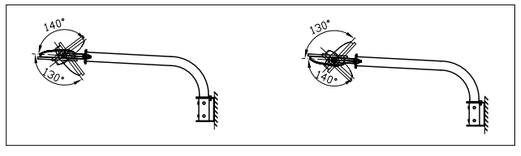
**GRASS MOUNTING SPIKE - DIMENSIONS**




(mm)

| | FINISH | DESCRIPTION |
|---|---|---|
| **WARM WHITE** | | |
| LEDEUFX0004 | White | Grass Mounting Spike |
| LEDEUFX0005 | Silver | |
| LEDEUFX0002 | White | Wall mounting Arm |
| LEDEUFX0003 | Silver | |

**BEAM ANGLE**






# OUTDOOR

## E-CORE LED FLOODLIGHT 3000

30-40W - up to 2,880 lm
warm or neutral white
3000 K/4000 K/5000 K
60,000 hours life
beam angle 11°/25°/43°/58° x 127°
silver

## E-CORE LED FLOODLIGHT 5500

57-75 W - up to 5,760 lm
warm or neutral white
3000 K/4000 K/5000 K
60,000 hours life
beam angle 11°/25°/43°/58° x 127°
silver

# Recessed and Downlights

## Light - as you like it

Anyone who wants to be able to use all possible means to save energy uses LED lighting solutions. In particular, our recessed luminaires and downlights inspire and save in many ways, because they are used almost universally - in large offices, classrooms, auditoriums, halls and corridors, shops and homes.

They combine an inspiring atmosphere of light, functional lighting and the highest energy and cost saving potential. A lighting solution could hardly be more complete.

## NEOGRID

Energy efficiency on a completely new level – with up to 122 lm/W the LED Baselight NEOGRID outranges even modern fluorescent lamp technologies. DALI controllable lumen packages of up to 3,650 lm combined with excellent light quality and compliance to the EN 12464 make this unobtrusive louvre luminaire the perfect solution for today's office environments. All this is rounded off with a comprehensive product line-up, offering optimized flexibility and meeting various application requirements.

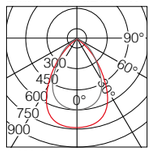
DIMMABLE

DALI

**FEATURES**

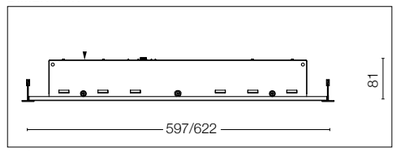
- Dimmable: Yes / DALI
- Electrical class: I
- Protection rating: IP20
- Power factor: > 0.9
- ENEC
- White or aluminium specular reflector surface
- DC capability: Yes

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

**SYSTEM CEILING MODULE**
**600 x 600 mm**
**625 x 625 mm**

**600/625 MODULE**

| | REFLECTOR | COLOUR TEMPERATURE | UGR | GRID CEILINGS | LUMINOUS FLUX | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUR00004D30N | White | 3000 K | ≤ 19 | 600 x 600 mm | • 3,100 lm | 30 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUR00005D30N | White | | | 625 x 625 mm | • 3,100 lm | 30 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUR00006D30N | Aluminium | | ≤ 16 | 600 x 600 mm | • 3,370 lm | 30 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUR00007D30N | Aluminium | | | 625 x 625 mm | • 3,370 lm | 30 W | 220 - 240 V | 80 | 50,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUR00004D40N | White | 4000 K | ≤ 19 | 600 x 600 mm | • 3,350 lm | 30 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUR00005D40N | White | | | 625 x 625 mm | • 3,350 lm | 30 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUR00006D40N | Aluminium | | ≤ 16 | 600 x 600 mm | • 3,650 lm | 30 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUR00007D40N | Aluminium | | | 625 x 625 mm | • 3,650 lm | 30 W | 220 - 240 V | 80 | 50,000 h |

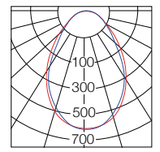
## E-CORE LED PANEL 2

Extremely thin, absolutely homogenous and very efficient – the edge-lit ECORE LED Panel 2 stands for up-to-date general lighting. With a luminous flux of up to 3,500 lm, excellent light quality and compliance to the EN 12464 this unobtrusive luminaire is the ideal fit for a wide range of functional and representative areas. The E-CORE LED Panel 2 is suitable for standard 600 mm and 625 mm grid ceilings, furthermore it can be easily converted into an elegant suspended panel by using the additional suspension kit.

**FEATURES**

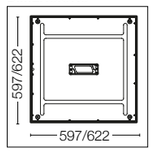
- Dimmable: No
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.9
- Temperature range: 5 °C – 40 °C

**LIGHT DISTRIBUTION**



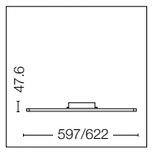

(cd/klm)

**DIMENSIONS**




(mm)

**DIMENSIONS**




(mm)

**SYSTEM CEILING MODULE**
**600 x 600 mm**
**625 x 625 mm**

**600/625 MODULE**

| | COLOUR TEMPERATURE | UGR | GRID CEILINGS | LUMINOUS FLUX | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | |
| LEDEUR00008N30 | 3000 K | ≤ 19 | 597 x 597 mm | • 3,300 lm | 41 W | 220 - 240 V | 80 | 30,000 h |
| LEDEUR00009N30 | | ≤ 19 | 622 x 622 mm | • 3,300 lm | 41 W | 220 - 240 V | 80 | 30,000 h |
| **NEUTRAL WHITE** | | | | | | | | |
| LEDEUR00008N40 | 4000 K | ≤ 19 | 597 x 597 mm | • 3,500 lm | 41 W | 220 - 240 V | 80 | 30,000 h |
| LEDEUR00009N40 | | ≤ 19 | 622 x 622 mm | • 3,500 lm | 41 W | 220 - 240 V | 80 | 30,000 h |
| LEDEURX0002 | Suspension Kit (2 x 1350 mm) | | | | | | | |

E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

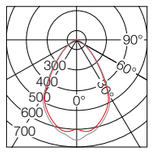
## E-CORE LED DOWNLIGHT 1100/1600

Uniform light levels – the suitable job description for this high-performance downlight for the retail sector. With its simple, minimalist shape and flush mounting, it integrates excellently with your design concept. And the replaceable Toshiba LIGHT ENGINE makes it a sustainable long-term investment, wherever it's used.

**FEATURES**

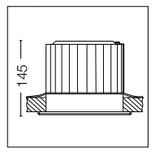
- Applicable lamp: E-CORE LED LIGHT ENGINE
- Dimmable: Yes / Trailing Edge phase control
- Electrical class: I
- Protection rating: IP20
- Power factor: > 0.7
- Temperature range: 5 °C – 35 °C

**LIGHT DISTRIBUTION**



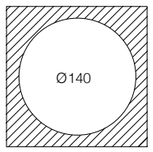

(cd/klm)

**DIMENSIONS**




(mm)

**CUT-OUT**




(mm)

**DIMMABLE**

| | FINISH | COLOUR TEMPERATURE | UGR | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUD00049S30 | White | 3000 K | 19 | • 1,060 lm | 72° | 18 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00062S30 | Silver | | 16 | | 36° | | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00050S30 | White | 3000 K | 22 | • 1,480 lm | 72° | 23 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00064S30 | Silver | | 19 | | 37° | | 220 - 240 V | > 80 | 40,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUD00049S40 | White | 4000 K | 19 | • 1,060 lm | 72° | 18 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00062S40 | Silver | | 16 | | 36° | | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00050S40 | White | 4000 K | 22 | • 1,530 lm | 72° | 23 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00064S40 | Silver | | 19 | | 37° | | 220 - 240 V | > 80 | 40,000 h |

**Exists also in black and silver. Please see our website or contact your representative for further information.**

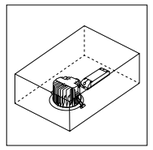
E-CORE™ LED Lighting

## E-CORE LED DOWNLIGHT 3000

Event centers, conference rooms, cinemas – large spaces with sophisticated lighting design set the stage for this powerful downlight. Its compact dimensions and DALI controllability make it a convenient replacement for up to 2 x 32 W compact fluorescent and 1 x 35 W HID systems. Furthermore, a choice of different beam angles and UGR versions offers great flexibility and enables the use in various application fields – always optimally fulfilling the respective lighting task requirements.

**DIMMABLE**

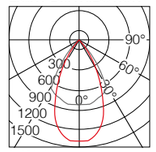
DALI



**FEATURES**

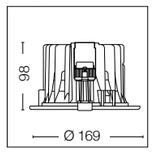
- Dimmable: Yes / DALI
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.9
- Temperature range: 5 °C – 35 °C
- 1 driver has to be ordered separately

**LIGHT DISTRIBUTION**



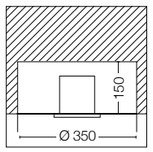

(cd/klm)

**DIMENSIONS**



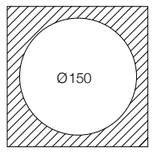

(mm)

**DIMENSIONS**




(mm)

**CUT-OUT**




(mm)

| | FINISH | COLOUR TEMPERATURE | UGR | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUD00028D30 | White | 3000 K | 19 | 2,680 lm | 50° | 46 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUD00026D30 | White | | 22 | 2,630 lm | 73° | | 220 - 240 V | 80 | 50,000 h |
| LEDEUD00029D30 | White | 3000 K | 25 | 2,675 lm | 55° | 46 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUD00128D30 | White | | 28 | 2,730 lm | 78° | | 220 - 240 V | 80 | 50,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUD00028D40 | White | 4000 K | 19 | • 2,820 lm | 50° | 46 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUD00026D40 | White | | 22 | • 2,760 lm | 73° | | 220 - 240 V | 80 | 50,000 h |
| LEDEUD00029D40 | White | 4000 K | 25 | 2,815 lm | 55° | 46 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUD00128D40 | White | | 28 | 2,870 lm | 78° | | 220 - 240 V | 80 | 50,000 h |

Exists also in black and silver. Please contact your representative for further information.

| | |
|---|---|
| Renewal plate | Recessing diameter: 250mm, White: LEDEUDX0001, Black: LEDEUDX0003, Silver: LEDEUDX0005 |
| LEK-50001CA01O | 50 W CC Driver (separately order) |

TOSHIBA
Leading Innovation

DIMMABLE

DALI



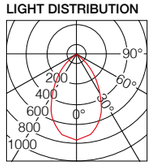
## E-CORE LED DOWNLIGHT 6000

Brilliant, controllable light even with high ceilings: the DOWNLIGHT 6000 is the contemporary replacement light for areas where 70 W HID were traditionally used. High foyers, large auditoriums, open staircases or shops – with up to 5,800 lumen this effective powerhouse covers all the bases in lighting design for public and commercial buildings.

**FEATURES**

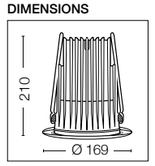
- Dimmable: Yes / DALI
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.9
- Temperature range: 5 °C – 40 °C
- 2 drivers have to be ordered separately

**LIGHT DISTRIBUTION**



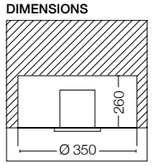

(cd/klm)

**DIMENSIONS**



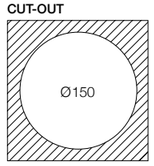

(mm)

**DIMENSIONS**




(mm)

**CUT-OUT**




(mm)

| | FINISH | COLOUR TEMPERATURE | UGR | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUD00129D30 | White | 3000 K | 28 | 5,650 lm | 72° | 92 W | 220 - 240 V | 80 | 50,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUD00129D40 | White | 4000 K | 28 | 5,945 lm | 72° | 92 W | 220 - 240 V | 80 | 50,000 h |
| LEK-50001CA01O | 50 W CC Driver (separately order, 2 drivers required) | | | | | | | | |

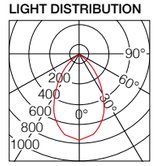
## E-CORE LED BANKLIGHT

The basis of the DALI dimmable E-CORE LED BANKLIGHT is the E-CORE LED DOWNLIGHT 6000. Integrated into robust housing, simple surface mounting is possible. On account of its high light intensity and its long service life, the E-CORE LED BANKLIGHT is good for lighting in shopping malls, theatres, industrial plants or entryways.

**FEATURES**

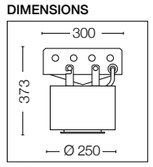
- Dimmable: Yes / DALI
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.95
- Temperature range: 0 °C – 40 °C
- 2 drivers have to be ordered separately

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

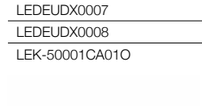



(mm)

**DIMMABLE**

DALI

| | FINISH | COLOUR TEMPERATURE | UGR | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUD00130D30 | White | 3000 K | 28 | 5,650 lm | 72° | 92 W | 220 - 240 V | 80 | 50,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUD00130D40 | White | 4000 K | 28 | 5,945 lm | 72° | 92 W | 220 - 240 V | 80 | 50,000 h |
| LEDEUDX0007 | Cylinder case | | | | | | | | |
| LEDEUDX0008 | Surface-mounting frame | | | | | | | | |
| LEK-50001CA01O | 50 W CC Driver (separately order, 2 drivers required) | | | | | | | | |



E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

# PACK Series

## Ready for the good light

Interior designer popular classic: when it is not the luminaire but the light that is key, the Toshiba PACK Series products are ideal for restaurants, shops, and for hall or room lighting.

They can be integrated into the wall or ceiling, swivelled and dimmed at will, and have a wide beam angle or spot light depending on the application.

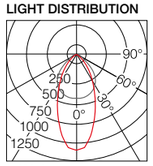
## PACK omni mini 2

Small, efficient, simple – the all new PACK omni mini 2 opens up great opportunities for design integration and the easy step to efficiency, light quality and flexibility. Featuring the next generation of GX53-1 lamps, this compact downlight now appears in minimalistic dimensions, still with fixed and adjustable versions. The PACK omni mini 2 can replace up to 1 x 18 W conventional downlights and offers a replaceable light source – making it the easy and future-proof choice for energy saving in many applications.

**FEATURES**

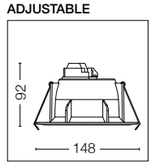
- Applicable lamp: E-CORE GX53-1
- Dimmable: No
- Electrical class: II
- Protection rating: IP20
- Power factor: 0.55
- Temperature range: 5 °C – 35 °C
- Fix and adjustable (30°)

**LIGHT DISTRIBUTION**



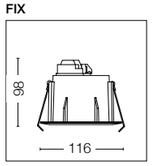

(cd/klm)

**DIMENSIONS ADJUSTABLE**



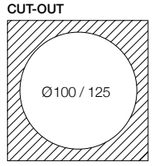

(mm)

**DIMENSIONS FIX**




(mm)

**CUT-OUT**




(mm)

| | COMPLETE WITH LAMP | FINISH | CEILING CUT-OUT | ADJUS-TABLE | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | | |
| LEDEUD00152S27 | Yes | White | 100 mm | No | 2700 K | • 405 lm | 100° | 5.7 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00156S27 | Yes | White | 100 mm | No | | • 560 lm | 100° | 8.3 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00153S27 | Yes | White | 125 mm | Yes | | • 485 lm | 40° | 5.7 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00157S27 | Yes | White | 125 mm | Yes | | • 650 lm | 40° | 8.3 W | 220 - 240 V | > 80 | 40,000 h |
| **NEUTRAL WHITE** | | | | | | | | | | | |
| LEDEUD00156S40 | Yes | White | 100 mm | No | 4000 K | • 600 lm | 100° | 8.3 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00143C | No | White | 100 mm | No | Fixture only - Order lamp separately (see page 79) | | | | | | |
| LEDEUD00144C | No | White | 125 mm | Yes (30°) | | | | | | | |

E-CORE™ LED Lighting

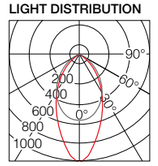
## PACK omni 2

The classic downlight, reinvented. With its unobtrusive white housing, wide beam angles and powerful luminous flux, the PACK omni 2 is a suitable replacement for compact fluorescent lamps up to 2 x 26 W and a good allrounder in all secondary areas of buildings. What's new: the redesigned PACK omni 2 comes in two sizes and incorporates the next generation of the Toshiba LED LIGHT ENGINE – a light source that can be replaced in an instant and now offers 2,200 lm and DALI controllable versions (on demand).

**FEATURES**

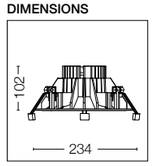
- Applicable lamp: E-CORE LED LIGHT ENGINE 2
- Dimmable: No / DALI controllable types on demand
- Electrical class: I
- Protection rating: IP20
- Power factor: 0.9
- Temperature range: 5 °C – 35 °C

**LIGHT DISTRIBUTION**



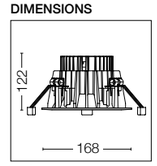

(cd/klm)

**DIMENSIONS**



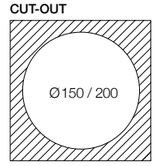

(mm)

**DIMENSIONS**




(mm)

**CUT-OUT**




(mm)

| | COMPLETE WITH LAMP | FINISH | CEILING CUT-OUT | UGR | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | | |
| LEDEUD00145S30 | Yes | White | 150 mm | ≤ 22 | 3000 K | 970 lm | 55° | 12.7 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00147S30 | Yes | White | | ≤ 22 | | 1,410 lm | 55° | 17.5 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00149S30 | Yes | White | | ≤ 22 | | 1,940 lm | 55° | 24.0 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00165S30 | Yes | White | 200 mm | ≤ 22 | | 1,020 lm | 53° | 12.7 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00167S30 | Yes | White | | ≤ 22 | | 1,480 lm | 53° | 17.5 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00169S30 | Yes | White | | ≤ 22 | | 2,040 lm | 53° | 24.0 W | 220 - 240 V | > 80 | 40,000 h |
| **NEUTRAL WHITE** | | | | | | | | | | | |
| LEDEUD00146S40 | Yes | White | 150 mm | ≤ 22 | 4000 K | 1,010 lm | 76° | 12.7 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00148S40 | Yes | White | | ≤ 22 | | 1,480 lm | 76° | 17.5 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00150S40 | Yes | White | | ≤ 25 | | 2,030 lm | 76° | 24.0 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00166S40 | Yes | White | 200 mm | ≤ 22 | | 1,100 lm | 78° | 12.7 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00168S40 | Yes | White | | ≤ 22 | | 1,600 lm | 78° | 17.5 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00170S40 | Yes | White | | ≤ 25 | | 2,190 lm | 78° | 24.0 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00141C | No | White | 150 mm | Non-dim fixture only – order lamp separately (see page 82) | | | | | | | |
| LEDEUD00161C | No | White | 200 mm | | | | | | | | |
| LEDEUD00142C | No | White | 150 mm | DALI fixture only – order lamp separately (see page 83) | | | | | | | |
| LEDEUD00162C | No | White | 200 mm | | | | | | | | |

TOSHIBA
Leading Innovation

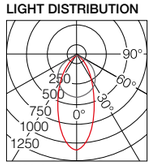
## PACK omni mini

LED Downlights made easy and simple – the PACK omni mini opens up great opportunities for the small step to energy efficiency, light quality and flexibility. Next to fixed and adjustable luminaires, this compact line-up is rounded off with different colour temperatures and beam angles. Replacing up to 1 x 18 W conventional downlights and offering a replaceable light source, the PACK omni mini is the easy and future-proof choice for energy saving in many applications.

**FEATURES**

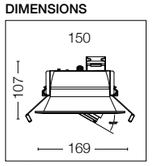
- Applicable lamp: E-CORE GX53
- Dimmable: No
- Electrical class: I
- Protection rating: IP20
- Power factor: 0.55
- Temperature range: 5 °C – 35 °C

**LIGHT DISTRIBUTION**



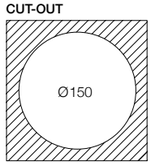

(cd/klm)

**DIMENSIONS**




(mm)

**CUT-OUT**




(mm)

| | COMPLETE WITH LAMP | FINISH | ADJUSTABLE | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LEDEUD00110S27 | Yes | White | No | 2700 K | • 445 lm | 104° | 6.9 W | 220 - 240 V | 80 | 25,000 h |
| LEDEUD00111S27 | Yes | White | Yes | | • 480 lm | 44° | | 220 - 240 V | 80 | 25,000 h |
| LEDEUD00112S27 | Yes | White | No | | • 615 lm | 105° | 8.9 W | 220 - 240 V | 80 | 25,000 h |
| LEDEUD00113S27 | Yes | White | Yes | | • 660 lm | 48° | | 220 - 240 V | 80 | 25,000 h |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LEDEUD00110S40 | Yes | White | No | 4000 K | • 480 lm | 104° | 6.9 W | 220 - 240 V | 80 | 25,000 h |
| LEDEUD00111S40 | Yes | White | Yes | | • 515 lm | 44° | | 220 - 240 V | 80 | 25,000 h |
| LEDEUD00112S40 | Yes | White | No | | • 660 lm | 105° | 8.9 W | 220 - 240 V | 80 | 25,000 h |
| LEDEUD00113S40 | Yes | White | Yes | | • 695 lm | 48° | | 220 - 240 V | 80 | 25,000 h |
| LEDEUD00126C | No | White | No | Fixture only - For information about suitable modules, please see our website: www.toshiba.eu/lighting | | | | | | |
| LEDEUD00127C | No | White | Yes | | | | | | | |

More information about the GX53 module on our website: www.toshiba.eu/lighting

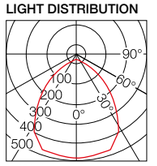
## PACK omni

This product is a classic downlight. With its neutral white light colour, wide angle of radiation and powerful luminous flux, it is a suitable replacement for compact fluorescent lamps and a good all rounder in all secondary areas of buildings, such as access and waiting areas and corridors. The advantages of its economical, eco-friendly design become clear after 40,000 hours of operation with the Toshiba LED LIGHT ENGINE, a light source that can be replaced in an instant.

**FEATURES**

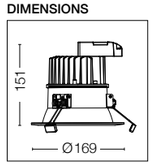
- Applicable lamp: LED LIGHT ENIGINE
- Dimmable: Yes / Trailing Edge phase control
- Electrical class: I
- Protection rating: IP20
- Power factor: 0.7
- Temperature range: 5 °C – 35 °C

**LIGHT DISTRIBUTION**



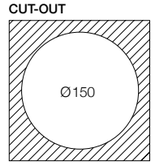

(cd/klm)

**DIMENSIONS**




(mm)

**CUT-OUT**




(mm)

**DIMMABLE**

| | COMPLETE WITH LAMP | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUD00076S40N | Yes | White | 4000 K | 1,040 lm | 90° | 18 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00077S40N | | | | 1,560 lm | | 23 W | | | |
| LEDEUD00131C | No | White | Fixture only - For information about suitable modules, please see our website: www.toshiba.eu/lighting | | | | | | |

More information about the LED LIGHT ENGINE module on our website: www.toshiba.eu/lighting

E-CORE™ LED Lighting

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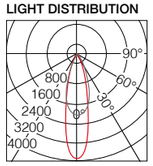
## PACK accent 3

This miniaturized downlight range features the latest Toshiba PAR16 lamps and offers great flexibility for an attractive accent lighting in various application fields. Where in the past halogen lamps up to 50 W have been widely used, now this simple but highly efficient 5.4 W LED solution makes an appropriate alternative - convincing through brilliance, precise beam angles, excellent light quality and a very long lifetime of 40,000 h. The lighting head can be swiveled by 30°, allowing to target the light where it is needed, different beam angles and housing colours round off the portfolio.

**FEATURES**

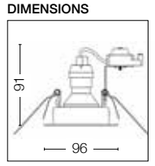
- Applicable lamp: E-CORE PAR16
- Dimmable: Yes / Phase control
- Electrical class: II
- Protection rating: IP20
- Power factor: 0.64
- Temperature range: 5 °C – 40 °C

**LIGHT DISTRIBUTION**



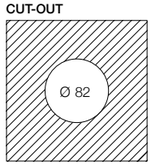
(cd/klm)

**DIMENSIONS**



(mm)

**CUT-OUT**



(mm)

**DIMMABLE**

| | FINISH | COLOUR TEMPERATURE | LAMP LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | |
| LEDEUD00135S30 | White | 3000 K | • 355 lm | 40° | 5.4 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00136S30 | Silver | | • 355 lm | | 5.4 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00137S30 | Black | | • 355 lm | | 5.4 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00138S30 | White | 3000 K | • 355 lm | 25° | 5.4 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00139S30 | Silver | | • 355 lm | | 5.4 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00140S30 | Black | | • 355 lm | | 5.4 W | 220 - 240 V | > 80 | 40,000 h |
| LEDEUD00132C | White | Fixture only - For information about suitable modules, please see our website: www.toshiba.eu/lighting | | | | | | |
| LEDEUD00133C | Silver | | | | | | | |
| LEDEUD00134C | Black | | | | | | | |

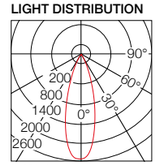
## PACK accent track

This miniaturised spotlight convinces through brilliant light quality, precise light distribution and a long lifetime – all combined in an appealing compact shape. Where in the past halogen lamps up to 50W have been widely used, now this simple but highly efficient LED solution makes an appropriate alternative. It features the latest Toshiba PAR16 lamp and offers an attractive accent lighting for many applications.

**FEATURES**

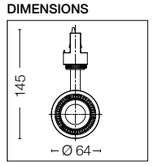
- Applicable lamp: E-CORE PAR16
- Dimmable: No
- Electrical class: I
- Protection rating: IP20
- Power factor: 0.7
- Temperature range: 5 °C – 35 °C
- With 3-circuit universal adapter
- Fixture is rotating 330°, pivoting 90°

**LIGHT DISTRIBUTION**



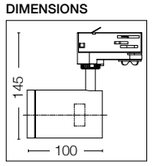
(cd/klm)

**DIMENSIONS**



(mm)

**DIMENSIONS**



(mm)

| | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | |
| LEDEUS00004S30 | White | 3000 K | 350 lm | 36° | 5.5 W | 220 - 240 V | > 80 | 15,000 h |
| LEDEUS00005S30 | Silver | | 350 lm | 36° | 5.5 W | 220 - 240 V | > 80 | 15,000 h |
| LEDEUS00091C | White | Fixture only - Order lamp separately (see page 62) | | | | | | |
| LEDEUS00092C | Silver | | | | | | | |

E-CORE™ LED Lighting

TOSHIBA
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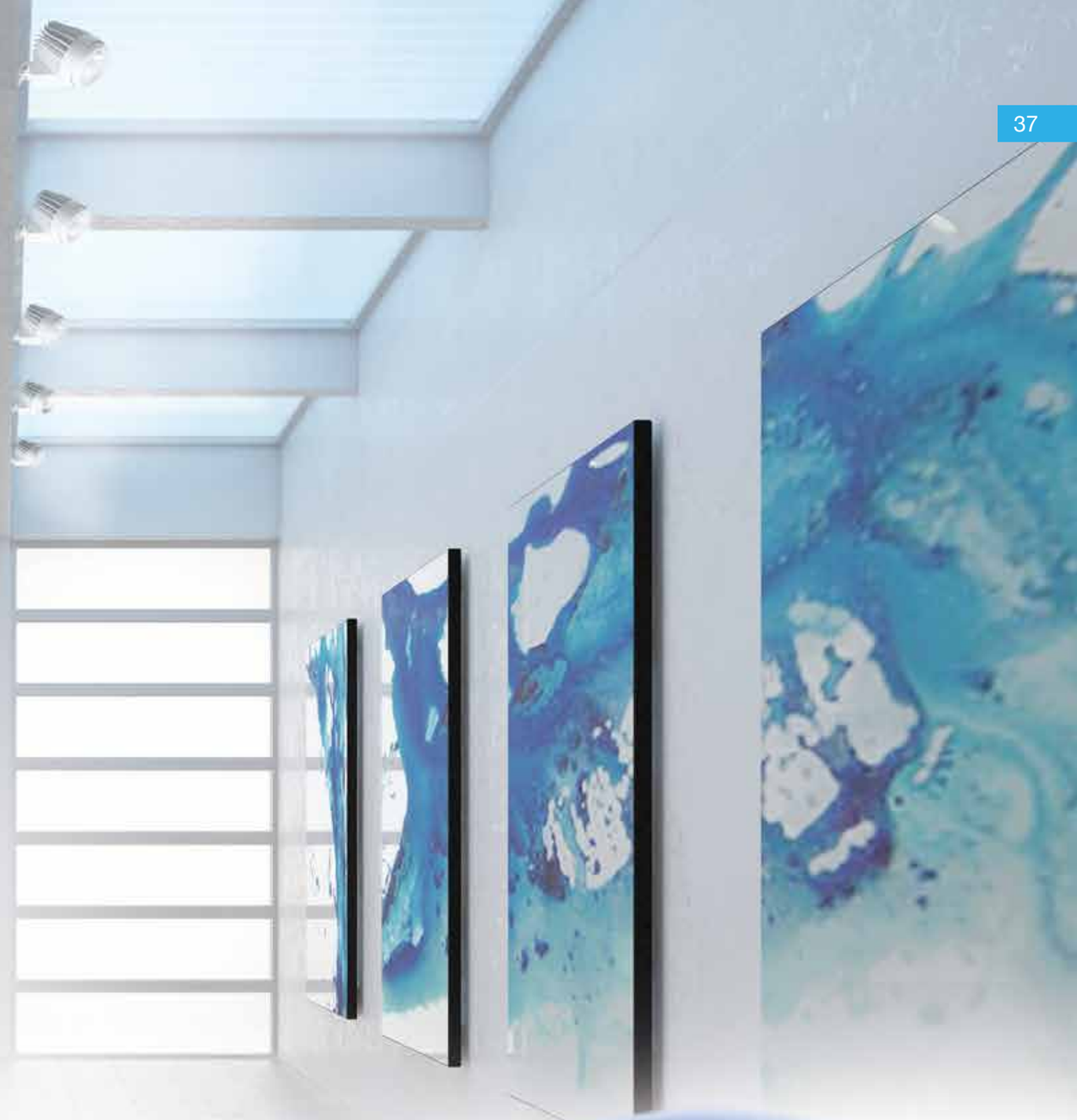
# Spotlights

## I want to see just that

To specifically set the scene, to put the focus on what deserves it, to emphasize what is important - these are the strengths of the spotlight.
Our spotlights are highly-efficient products for effective lighting effects - from subtle to obvious.

Their broad functionality and excellent design give you a great deal of leeway in the design of your spaces.



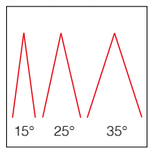
## NEOACCENT Tracklight

Dynamic design, powerful accents, full flexibility - the NEOACCENT series offers everything to enable a timeless, high quality accent illumination with LED. The tracklight convinces through its discrete streamline look that perfectly integrates into different indoor architecture and enables an optimized heat management. With lumen packages of up to 2,600 lm the NEOACCENT series can efficiently replace 20 W and 35 W HID systems.

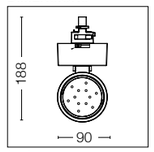
**FEATURES**

- Dimmable: Yes / Control on gear box
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C
- Driver included in gear box
- Lighting head rotates 355°, pivots 90°
- With 3-circuit universal adapter

**LIGHT DISTRIBUTION**

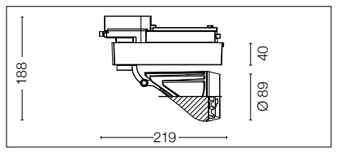



**DIMENSIONS**




(mm)

**DIMENSIONS**




(mm)

| | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUS00045B30 | White | 3000 K | 1,600 lm | 15° | 13,830 cd | 22 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00046B30 | White | | 1,600 lm | 25° | 8,000 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00047B30 | White | | 1,500 lm | 35° | 3,300 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00054B30 | White | | 2,420 lm | 15° | 21,170 cd | 32 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00055B30 | White | | 2,370 lm | 25° | 10,970 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00056B30 | White | | 2,340 lm | 35° | 4,885 cd | | 220 - 240 V | 85 | 40,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUS00045B40 | White | 4000 K | 1,700 lm | 15° | 14,830 cd | 22 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00046B40 | White | | 1,700 lm | 25° | 8,700 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00047B40 | White | | 1,600 lm | 35° | 3,700 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00054B40 | White | | 2,600 lm | 15° | 22,780 cd | 32 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00055B40 | White | | 2,550 lm | 25° | 11,800 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00056B40 | White | | 2,520 lm | 35° | 5,260 cd | | 220 - 240 V | 85 | 40,000 h |

**Exists also in black and silver. Please see our website or contact your representative for further information.**
Additional High CRI filter available as accessory (see page 41)

E-CORE™ LED Lighting

DIMMABLE

DALI

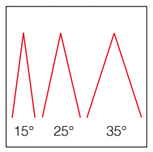
## NEOACCENT Battery

The NEOACCENT Battery recessed luminaires enable solutions that can be combined individually to meet even the most unusual challenges. The single, double and triple installation frames can be fitted, according to the customer`s wishes and needs, with any of the varied range of light heads. These integrate seamlessly into the ceiling design, still offering maximum flexibility through adjustability - always projecting the light to where it is needed.

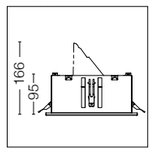
**FEATURES**

- Dimmable: Yes / DALI
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C
- Independent driver included
- Individual lighting heads swivel out 30°, rotate 360°

**LIGHT DISTRIBUTION**

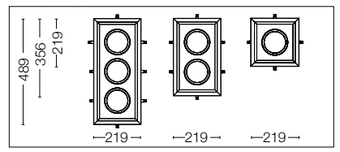



**DIMENSIONS**




(mm)

**DIMENSIONS**




(mm)

| | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **LIGHT HEAD - WARM WHITE** | | | | | | | | | |
| LEDEUS00072D30 | White | 3000 K | 1,600 lm | 15° | 13,830 cd | 22 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00073D30 | White | | 1,600 lm | 25° | 8,000 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00074D30 | White | | 1,500 lm | 35° | 3,300 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00082D30 | White | | 2,420 lm | 15° | 21,170 cd | 32 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00083D30 | White | | 2,370 lm | 25° | 10,970 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00084D30 | White | | 2,340 lm | 35° | 4,885 cd | | 220 - 240 V | 85 | 40,000 h |
| **LIGHT HEAD - NEUTRAL WHITE** | | | | | | | | | |
| LEDEUS00072D40 | White | 4000 K | 1,700 lm | 15° | 14,830 cd | 22 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00073D40 | White | | 1,700 lm | 25° | 8,700 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00074D40 | White | | 1,600 lm | 35° | 3,700 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00082D40 | White | | 2,600 lm | 15° | 22,780 cd | 32 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00083D40 | White | | 2,550 lm | 25° | 11,800 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00084D40 | White | | 2,520 lm | 35° | 5,260 cd | | 220 - 240 V | 85 | 40,000 h |

| | |
|---|---|
| LEDEUS00063C | Installation frame for 1 Light head / White / Ceiling cut-out: 200 x 200 mm |
| LEDEUS00066C | Installation frame for 2 Light heads / White / Ceiling cut-out: 200 x 337 mm |
| LEDEUS00069C | Installation frame for 3 Light heads / White / Ceiling cut-out: 200 x 468 mm |

**Exists also in black and silver. Please see our website or contact your representative for further information.**
Additional High CRI filter available as accessory (see page 41)

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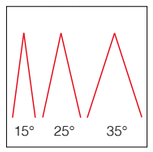
## NEOACCENT Extractable

Individual shop architectures, diverse colour concepts and different ceiling designs: NEOACCENT Extractable recessed spotlights, with their two different colour temperatures, three housing colours and optional High CRI Filter, can be integrated perfectly into any retail space. Meanwhile, the light head‘s ability to be rotated and pivoted ensures optimum flexibility, even where space is limited. In addition, the Extractable spotlights can always be combined with the other products in the NEOACCENT series to create integrated lighting concepts.

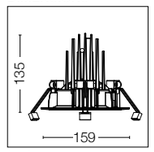
**FEATURES**

- Dimmable: Yes / DALI
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C
- Independent driver included
- Lighting head swivels out 45°, rotates 360°

**LIGHT DISTRIBUTION**

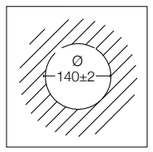



**DIMENSIONS**




(mm)

**CUT-OUT**




(mm)

**DIMMABLE**

DALI

| | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUS00027D30 | White | 3000 K | 1,600 lm | 15° | 13,830 cd | 22 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00028D30 | White | | 1,600 lm | 25° | 8,000 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00029D30 | White | | 1,500 lm | 35° | 3,300 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00036D30 | White | | 2,420 lm | 15° | 21,170 cd | 32 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00037D30 | White | | 2,370 lm | 25° | 10,970 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00038D30 | White | | 2,340 lm | 35° | 4,885 cd | | 220 - 240 V | 85 | 40,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUS00027D40 | White | 4000 K | 1,700 lm | 15° | 14,830 cd | 22 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00028D40 | White | | 1,700 lm | 25° | 8,700 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00029D40 | White | | 1,600 lm | 35° | 3,700 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00036D40 | White | | 2,600 lm | 15° | 22,780 cd | 32 W | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00037D40 | White | | 2,550 lm | 25° | 11,800 cd | | 220 - 240 V | 85 | 40,000 h |
| LEDEUS00038D40 | White | | 2,520 lm | 35° | 5,260 cd | | 220 - 240 V | 85 | 40,000 h |

**Exists also in black and silver. Please see our website or contact your representative for further information.**
Additional High CRI filter available as accessory (see page 41)

E-CORE™ LED Lighting

## NEOACCENT CRI Filter

Please find here an indication of the colour rendition values when using the additional high CRI filter, as well as detailed photometric information:

| | | CCT (K) | Ra | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 W | 3000 K | 3,000 | 85 | 82 | 91 | 98 | 83 | 83 | 88 | 88 | 67 | 18 | 75 | 79 | 69 | 83 | 97 | 76 |
| | 3000 K with filter | 3,060 | **96** | 98 | 97 | 89 | 94 | 99 | 96 | 97 | 97 | **87** | 89 | 94 | 83 | 99 | 92 | 98 |
| | 4000 K | 4,000 | 85 | 84 | 90 | 94 | 83 | 83 | 86 | 88 | 71 | 29 | 78 | 82 | 66 | 87 | 97 | 81 |
| | 4000 K with filter | 4,230 | **96** | 97 | 97 | 89 | 97 | 97 | 94 | 97 | 97 | **98** | 90 | 96 | 74 | 99 | 93 | 95 |
| 32 W | 3000 K | 3,000 | 85 | 82 | 91 | 98 | 83 | 83 | 88 | 88 | 67 | 18 | 75 | 79 | 69 | 83 | 97 | 76 |
| | 3000 K with filter | 3,060 | **96** | 98 | 97 | 89 | 94 | 99 | 96 | 97 | 97 | **87** | 89 | 94 | 83 | 99 | 92 | 98 |
| | 4000 K | 4,000 | 85 | 84 | 90 | 94 | 83 | 83 | 86 | 88 | 71 | 29 | 78 | 82 | 66 | 87 | 97 | 81 |
| | 4000 K with filter | 4,230 | **96** | 97 | 97 | 89 | 97 | 97 | 94 | 97 | 97 | **98** | 90 | 96 | 74 | 99 | 93 | 95 |

| | | LUMEN OUTPUT (lm) | | | CBCP (cd) | | |
|---|---|---|---|---|---|---|---|
| | CCT (K) | 15° | 25° | 35° | 15° | 25° | 35° |
| 22 W | 3000 K | 3,000 | 1,600 | 1,600 | 1,500 | 13,800 | 8,000 | 3,300 |
| | 3000 K with filter | 3,060 | 1,215 | 1,215 | 1,140 | 10,210 | 5,920 | 2,440 |
| | 4000 K | 4,000 | 1,700 | 1,700 | 1,600 | 14,830 | 8,700 | 3,700 |
| | 4000 K with filter | 4,230 | 1,290 | 1,290 | 1,215 | 10,970 | 6,435 | 2,735 |
| 32 W | 3000 K | 3,000 | 2,420 | 2,370 | 2,340 | 21,170 | 10,970 | 4,885 |
| | 3000 K with filter | 3,060 | 1,835 | 1,800 | 1,775 | 15,665 | 8,115 | 3,615 |
| | 4000 K | 4,000 | 2,600 | 2,550 | 2,520 | 22,780 | 11,800 | 5,260 |
| | 4000 K with filter | 4,230 | 1,975 | 1,935 | 1,915 | 16,855 | 8,730 | 3,890 |

| | DESCRIPTION | SIZE OF PACKAGING (L x H x W) | GROSS WEIGHT |
|---|---|---|---|
| **HIGH CRI FILTER** | | | |
| LEDEUSX0002 | Box of 10 pcs. | 150 x 150 x 100 mm | 374 g |

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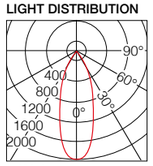
## E-CORE LED TRACKLIGHT 1200

This elegant spotlight range stands for demanding lighting solutions with its high-tech components. Whether for the high-quality presentation of goods or for displaying art, the spectrum of different colour and reflected beam characteristics offers exemplary creative leeway. The excellent colour reproduction makes it a suitable substitute for previous applications of 20 W HID lamps. As a chip-on-board design, the appealing eye-catcher ups the ante in the quality stakes with a multi shadow-free spotlight, the greatest power density and optimised thermo-management.

**FEATURES**

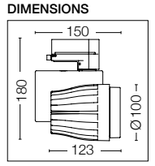
- Dimmable: No
- Electrical class: I
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C
- ENEC
- Twist & Lock cover
- With 3-circuit universal adapter

**LIGHT DISTRIBUTION**



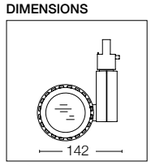

(cd/klm)

**DIMENSIONS**




(mm)

**DIMENSIONS**




(mm)

| | FINISH | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LEDEUS00006N30 | White | 3000 K | 1,000 lm | 40° | 2,200 cd | 21 W | 220 - 240 V | 80 | 40,000 h |
| LEDEUS00005N30 | White | | 1,100 lm | 22° | 4,700 cd | 21 W | 220 - 240 V | 80 | 40,000 h |
| **NEUTRAL WHITE** | | | | | | | | | |
| LEDEUS00006N40 | White | 4000 K | 1,300 lm | 40° | 2,600 cd | 21 W | 220 - 240 V | 80 | 40,000 h |
| LEDEUS00005N40 | White | | 1,300 lm | 22° | 5,600 cd | 21 W | 220 - 240 V | 80 | 40,000 h |

Exists also in black and silver. Please contact your representative for further information.

| | |
|---|---|
| LEDEUSX0001 | Colour rendering improvement filter (R9) |

| COLOUR RENDERING | Ra | R9 |
|---|---|---|
| 3000 K | 80 | 32 |
| 3000 K with filter | 90 | 94 |
| 4000 K | 80 | 24 |
| 4000 K with filter | 87 | 92 |

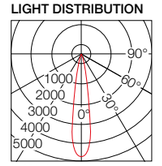
## GIMBAL TRACK SPOT111

The multitalented gimbal for row lighting systems. Like its mounting pendants, the spotlight relies on the intense-beam AR111 E-CORE illuminants and its gimbal mounting ensures limitless freedom in use. The harmonious union of the light and illuminant are convincing thanks to their masterful radiation and they guarantee excellent structural integration.

**FEATURES**

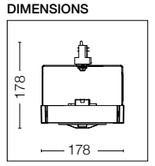
- Applicable lamp: E-CORE AR111
- Dimmable: No
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C
- With 3-circuit universal adapter

**LIGHT DISTRIBUTION**



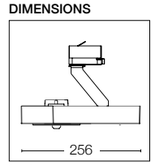

(cd/klm)

**DIMENSIONS**




(mm)

**DIMENSIONS**




(mm)

| | FINISH | RATED VOLTAGE | FREQUENCY | BASE |
|---|---|---|---|---|
| **FIXTURE** | | | | |
| LEDEUS00001C | White | 230 - 240 V | 50 Hz | G53 |
| LEDEUS00002C | Silver | | | |
| LEDEUS00003C | Black | | | |

AR111 lamp to be ordered separately (see pages 68/69)
Our AR111 10,5W and AR111 14,5W offer a wide range of colour temperatures, beam angles and wattages.

E-CORE™ LED Lighting

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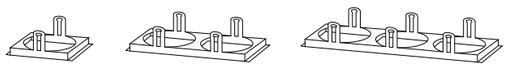


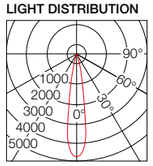

## GIMBAL RECESSED SPOT111

As a logical addition to the TRACK SPOT the RECESSED SPOT111 is the perfect downlight insert solution. It creates a discrete lighting architecture – even with low ceilings – and allows you to design the ceilings whichever way you like. The modular structure of this system has room for up to three spots. In this way you create an individual, friendly and balanced lighting atmosphere in shops, hotels and restaurants.

**FEATURES**

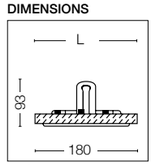
- Applicable lamp: E-CORE AR111
- Dimmable: No
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C

**LIGHT DISTRIBUTION**



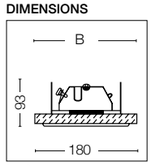

(cd/klm)

**DIMENSIONS**




(mm)

**DIMENSIONS**




(mm)

| | DESCRIPTION | FINISH | CEILING CUTOUT (mm) | RATED VOLTAGE | FREQUENCY | BASE |
|---|---|---|---|---|---|---|
| **FIXTURE** | | | | | | |
| LEDEUS00013C | Lamp Fitting (A) including SELV transformer | White | - | 230 - 240 V | 50 Hz | G53 |
| LEDEUS00014C | | Silver | - | | | |
| LEDEUS00015C | Frame for 1 Lamp Fitting (B) | White | 150 x 150 | - | - | - |
| LEDEUS00016C | | Silver | | - | - | - |
| LEDEUS00017C | Frame for 2 Lamp Fitting (C) | White | 150 x 295 | - | - | - |
| LEDEUS00018C | | Silver | | - | - | - |
| LEDEUS00019C | Frame for 3 Lamp Fitting (D) | White | 150 x 440 | - | - | - |
| LEDEUS00020C | | Silver | | - | - | - |

AR111 lamp to be ordered separately (see pages 68/69)
Our AR111 10,5W and AR111 14,5W offer a wide range of colour temperatures, beam angles and wattages.





# Spotlights

## NEOACCENT Tracklight

22/32 W - up to 2,600 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 15°/25°/35°
3-circuit universal adapter
dimmable on gear box

## NEOACCENT Battery

22/32 W - up to 2,600 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 15°/25°/35°
frame for 1/2/3 lamp fittings
DALI controllable

## NEOACCENT Extractable

22/32 W - up to 2,600 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 15°/25°/35°
DALI controllable

## E-CORE LED TRACKLIGHT 1200

21 W - up to 1,300 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 22°/40°
with 3-circuit universal adapter

## GIMBAL TRACK SPOT111

fixture for 3-circuit tracks
white / silver / black
base G53
for E-CORE AR111

## GIMBAL RECESSED SPOT111

fixture for recessed installation
frame for 1/2/3 lamp fittings
white / silver
base G53
for E-CORE AR111

# Lamps

## LED - lighting for all moods

It is time to change because conventional incandescent lamps are a thing of the past. With the modern E-CORE LED lamps from Toshiba, you can create the atmosphere you want in the private and commercial sector - indoors and outdoors.

With all the advantages that LED lamps offer you:

- Very low energy consumption
- Extremely long life
- Low heat production
- Shock and vibration resistant

E-CORE™ LED Lighting

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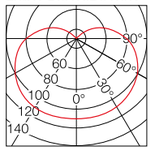
## E-CORE GLS WIDE 13W

With 1,060 lumen, Toshiba‘s design classic is way ahead from an aesthetic and performance perspective. As a lamp with an intense beam of the retrofit segment, it is the substitute for all fields of application of 75 W bulbs. Its broad reflected beam angle makes it the ideal light source even for large rooms – in brief: powerful, elegant and unbeatably efficient.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMMABLE**

(mm)

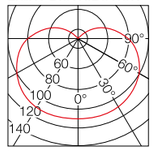
| | COLOUR TEMPERATURE | LUMINOUS FLUX | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | |
| LDAEU004C2710D | 2700 K | 1,060 lm | 13 W | 220 - 240 V | > 80 | 25,000 h | E27 | A+ |

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

## E-CORE GLS WIDE 10,5W

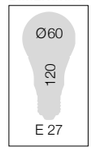
The new version of the popular archetype offers light in a familiar shape. However, this is the perfect product to replace the very popular 60 W incandescent bulb. With 806 lm, a warm color temperature and a good dimming capability this lamp offers the most comfortable ambience at your place.

**LIGHT DISTRIBUTION**

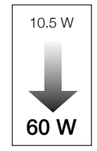



(cd/klm)

**DIMMABLE**




(mm)




| | COLOUR TEMPERATURE | LUMINOUS FLUX | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | |
| LDAEU003C2710D | 2700 K | 806 lm | 10.5 W | 220 - 240 V | > 80 | 25,000 h | E27 | A+ |

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE LED Lighting

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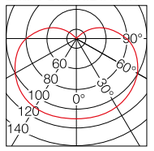
Leading Innovation

## E-CORE GLS WIDE 7W

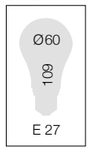
Less is more. A real light source whose design combines efficiency with classically styling. However, its revolutionary inner workings marry minimal technology and the maximum angle of radiation perfectly. A light that can be seen.

LIGHT DISTRIBUTION




(cd/klm)

DIMENSIONS




(mm)

DIMMABLE

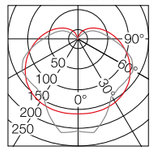
| | COLOUR TEMPERATURE | LUMINOUS FLUX | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | |
| LDAEU007C2710D | 2700 K | 470 lm | 7 W | 220 - 240 V | > 80 | 25,000 h | E27 | A+ |
| **NEUTRAL WHITE** | | | | | | | | |
| LDAEU007C4010D | 4000 K | 500 lm | 7 W | 220 - 240 V | > 80 | 25,000 h | E27 | A+ |

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting.

## E-CORE SPHERICAL E27

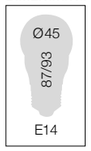
The E-CORE SPHERICAL E27 combines compact shape and tremendous decorative specifications. Up to 470 lm it will fit perfectly all your nice and small fittings.

LIGHT DISTRIBUTION




(cd/klm)

DIMENSIONS




(mm)

DIMMABLE

| | COLOUR TEMPERATURE | LUMINOUS FLUX | FINISH | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LDG007D2760DEU | 2700 K | • 270 lm | frosted | 4.5 W | 220 - 240 V | > 80 | 20,000 h | E27 | A+ |
| LDG009D2760DEU | | • 250 lm | clear | 4.5 W | 220 - 240 V | > 80 | 20,000 h | | A+ |
| LDG011D2760DEU | | • 470 lm | frosted | 6 W | 220 - 240 V | > 80 | 20,000 h | | A+ |

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE™ LED Lighting

TOSHIBA Leading Innovation

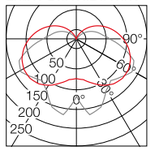
## E-CORE CANDLE

With its facetted crystal optics, the E-CORE CANDLE is a real head-turner. Smooth dimming, this light is the magic every chandelier needs.

## E-CORE SPHERICAL E14

This is what the master of directed accent lighting looks like: dimmable and compact in size, the ideal light source for ambient lighting.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

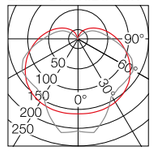
(mm)

**DIMMABLE**

| | COLOUR TEMPERATURE | LUMINOUS FLUX | FINISH | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | DISTRI-BUTION | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDC004D2760DEU | 2700 K | • 270 lm | frosted | 4.5 W | 220 - 240 V | > 80 | 20,000 h | 200° | E14 | A+ |
| LDC005D2760DEU | | • 250 lm | clear | 4.5 W | 220 - 240 V | > 80 | 20,000 h | 200° | | A+ |
| LDC006D2760DEU | | • 470 lm | frosted | 6 W | 220 - 240 V | > 80 | 20,000 h | 240° | | A+ |

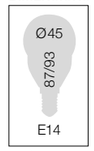
Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

**DIMMABLE**

| | COLOUR TEMPERATURE | LUMINOUS FLUX | FINISH | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LDG006D2760DEU | 2700 K | • 270 lm | frosted | 4.5 W | 220 - 240 V | > 80 | 20,000 h | E14 | A+ |
| LDG008D2760DEU | | • 250 lm | clear | 4.5 W | 220 - 240 V | > 80 | 20,000 h | | A+ |
| LDG010D2760DEU | | • 470 lm | frosted | 6 W | 220 - 240 V | > 80 | 20,000 h | | A+ |

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

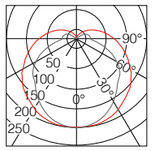
E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

## E-CORE HIGH LUMEN TUBE

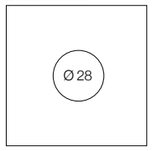
E-CORE HIGH LUMEN TUBE is your best partner for tube relamping project in any high ceiling applications. Thanks to its high lumen output and its incredible efficiency it enables to save a big amount of energy without compromising on light level and quality.

LIGHT DISTRIBUTION



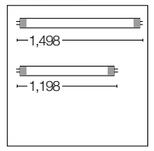

(cd/klm)

DIMENSIONS




(mm)

DIMENSIONS



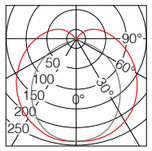

(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | SIZE (mm) | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LDL002D3074-EU | 3000 K | 2,160 lm | 160° | 23 W | 220 - 240 V | > 80 | 40,000 h | 1,198 | A+ |
| LDL002D3075-EU | | 2,700 lm | 160° | 24 W | 220 - 240 V | > 80 | 40,000 h | 1,498 | A+ |
| **NEUTRAL WHITE** | | | | | | | | | |
| LDL002D4074-EU | 4000 K | 2,400 lm | 160° | 23 W | 220 - 240 V | > 80 | 40,000 h | 1,198 | A+ |
| LDL002D4075-EU | | 3,000 lm | 160° | 24 W | 220 - 240 V | > 80 | 40,000 h | 1,498 | A++ |
| **COOL WHITE** | | | | | | | | | |
| LDL002D6574-EU | 6500 K | 2,400 lm | 160° | 23 W | 220 - 240 V | > 80 | 40,000 h | 1,198 | A+ |
| LDL002D6575-EU | | 3,000 lm | 160° | 24 W | 220 - 240 V | > 80 | 40,000 h | 1,498 | A++ |

## LED TUBE

The LED TUBE lets you perfectly light up large rooms and offices. It will ensure bright light and a low consumption of energy. It is available either in neutral white or cold white, in 800 to 2,300 lm.

LIGHT DISTRIBUTION

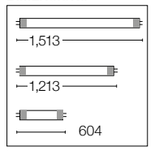



(cd/klm)

DIMENSIONS

(mm)

DIMENSIONS




(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | SIZE (mm) | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|
| **NEUTRAL WHITE** | | | | | | | | | |
| LDL003D4072EU | 4000 K | 800 lm | 150° | 9 W | 220 - 240 V | 80 | 40,000 h | 604 | A+ |
| LDL003D4074EU | | 1,700 lm | 150° | 18 W | 220 - 240 V | 80 | 40,000 h | 1,213 | A+ |
| LDL003D4075EU | | 2,100 lm | 150° | 23 W | 220 - 240 V | 80 | 40,000 h | 1,513 | A+ |
| **COOL WHITE** | | | | | | | | | |
| LDL003D6572EU | 6500 K | 900 lm | 150° | 9 W | 220 - 240 V | 80 | 40,000 h | 604 | A+ |
| LDL003D6574EU | | 1,800 lm | 150° | 18 W | 220 - 240 V | 80 | 40,000 h | 1,213 | A+ |
| LDL003D6575EU | | 2,300 lm | 150° | 23 W | 220 - 240 V | 80 | 40,000 h | 1,513 | A+ |

E-CORE™ LED Lighting

TOSHIBA
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This concerns all of us:

# Energy efficient lighting solutions

## It is time to upgrade

All over the world, solutions are being sought for efficient use of energy. One key area is lighting. In Europe, its share in total energy consumption is about 14%.

Already back in 2008, Toshiba announced the cessation of the production of conventional incandescent lamps because their energy efficiency is too low - they only reach efficiency classes D, E, F and G.

And in 2010, Toshiba actually ceased manufacturing incandescent lamps worldwide.

Since then, we have replaced incandescent lamps with modern LED lamps in almost all areas of lighting. Their low energy consumption and optimal light quality and excellent design make the transition so simple.

No matter where you need light, there is an energy-and cost-saving solution using Toshiba LED lamps and luminaires. Check for yourself, because this is the only way we can achieve the ambitious goals of energy reduction.

## So simply take advantage of LED

Save on the cost of electricity - with our LED lamps and luminaires, this can be up to 85%.

Your investment will pay for itself sooner than you think. Modern LED lighting solutions offer a very long operating life. They pay for themselves over a very short period of time.

You also avoid the heat of conventional incandescent lamps. And, depending on the number of incandescent lamps used, this reduces the need for additional cooling.

And, you reduce unnecessary CO2 pollution of our environment.

Thus, we are in a position to do something ourselves - for ourselves and for the environment.

Let‘s enter our world!



Watts vs Lumen

# Did you know?

## What are Lumens?

Lumen (or Luminous flux) is the standard measure for the mount of light emitted by a light source.

Unlike light intensity (Candela), Lumens is a measure of the amount of light rather than its intensity.

## How do I compare incandescent lamp using Lumens?

Using the table below you can see the Lumen values to be reached by LED Lamps and their incandescent equivalent (for non-directional lamp, as defined by EC244/2009).

## Equivalence ratings for non-directional lamps (EC244/2009)

| Rated lamp luminous flux ϕ [lm] | | | Claimed equivalent incandescent lamp power |
|---|---|---|---|
| CFL | Halogen | LED and other lamps | |
| 125 | 119 | 136 | **15 W** |
| 229 | 217 | 249 | **25 W** |
| 432 | 410 | 470 | **40 W** |
| 741 | 702 | 806 | **60 W** |
| 970 | 920 | 1,055 | **75 W** |
| 1,398 | 1,326 | 1,521 | **100 W** |
| 2,253 | 2,137 | 2,452 | **150 W** |
| 3,172 | 3,009 | 3,452 | **200 W** |

## Watts vs Lumens – Which should I use?

Lumens are the new way to measure and compare the light output from a lamp. Wattage is a measure of power consumed not light delivered. As lights are designed to emit light, the correct measurement is Lumen.

With LEDs it is not necessarily the wattage that tells you if it is more powerful than another LED lamp. Two LED lamps with the same wattage could have different Lumen values. To adequately compare the two lamps it is best compare Lumen output.

LED offers a true alternative to incandescent lamps and the drawbacks of other existing technologies.

LED lamps last longer, are more efficient, can be dimmed, and switch on instantly.

# Reflector Lamps

## The freedom to set the tone

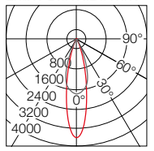
Lighting offers so many possibilities for the illumination of spaces, scenes and objects. With the rich variety of our reflector lamps, you can set the tone you want.

Whether as a ceiling or wall spotlight - Toshiba reflector lamps are available with various beam angles at the desired lighting levels and with plug-in or bayonet plugs. Just as you please.

## E-CORE PAR16 9W

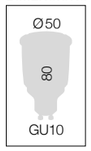
These elegant mains voltage spotlights with robust GU10 base shine with their excellent energy-saving credentials and ease of use. Suitable for a multitude of uses, they can be dimmed to offer atmospheric lighting or daylight-brightness accents – even at considerable distance. That is in brief the best-in-class lumen and light quality in the GU10 world.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

**DIMMABLE**

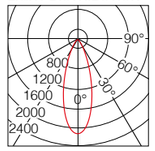
| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDRC0927MU1EUD2 | 2700 K | 520 lm | 25° | • 1,900 cd | 9 W | 220 - 240 V | > 80 | 40,000 h | GU10 | A |
| LDRC0927WU1EUD2 | | | 40° | • 950 cd | | | | | | |
| LDRC0930MU1EUD2 | 3000 K | 550 lm | 25° | • 2,000 cd | 9 W | 220 - 240 V | > 80 | 40,000 h | GU10 | A |
| LDRC0930WU1EUD2 | | | 40° | • 1,000 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDRC0940MU1EUD2 | 4000 K | 580 lm | 25° | • 2,000 cd | 9 W | 220 - 240 V | > 80 | 40,000 h | GU10 | A+ |
| LDRC0940WU1EUD2 | | | 40° | • 1,000 cd | | | | | | |

Dimmable product: please see the compatibility list available on our webpage. www.toshiba.eu/lighting

## E-CORE PAR16 8W

The E-CORE PAR16 8W sets a new standard among LED GU10 lamps. Thanks to its compact size and the high lumen output, this lamp will enable tremendous energy savings and intense light in all kinds of applications.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

(mm)

**DIMMABLE**

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDP006D27M40DEU | 2700 K | 460 lm | 36° | 1,000 cd | 8 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A |
| LDP006D27W40DEU | | | 60° | 500 cd | | | | | | |
| LDP006D30M40DEU | 3000 K | 460 lm | 36° | 1,000 cd | 8 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A |
| LDP006D30W40DEU | | | 60° | 500 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDP006D40M40DEU | 4000 K | 460 lm | 36° | 1,000 cd | 8 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A |
| LDP006D40W40DEU | | | 60° | 500 cd | | | | | | |

Dimmable product: please see the compatibility list available on our webpage. www.toshiba.eu/lighting

E-CORE™ LED Lighting

TOSHIBA
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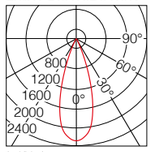
## E-CORE PAR16 7W

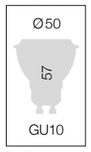
The new E-CORE PAR16 7W is the perfect product to replace any 50 W GU10 halogen lamp and saves up to 86% energy. The wide range that includes different beam angles and color temperatures will adapt to all the instalation requirements.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

**DIMMABLE**

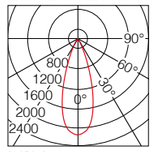
| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDP005D27M40DEU | 2700 K | 350 lm | 36° | 800 cd | 7 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A |
| LDP005D27W40DEU | | | 60° | 400 cd | | | | | | |
| LDP005D30M40DEU | 3000 K | 350 lm | 36° | 800 cd | 7 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A |
| LDP005D30W40DEU | | | 60° | 400 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDP005D40M40DEU | 4000 K | 350 lm | 36° | 800 cd | 7 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A |
| LDP005D40W40DEU | | | 60° | 400 cd | | | | | | |

Dimmable product: please see the compatibility list available on our webpage. www.toshiba.eu/lighting

## E-CORE PAR16 4,5W

The E-CORE PAR16 4,5W is here to replace the halogen GU10 lamps of 35 W. On top of that the product is now dimmable to create nice and cosy ambiences.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

(mm)

**DIMMABLE**

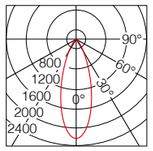
| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDP004D27M40DEU | 2700 K | 230 lm | 36° | 500 cd | 4.5 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A+ |
| LDP004D30M40DEU | 3000 K | 230 lm | 36° | 500 cd | 4.5 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A+ |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDP004D40M40DEU | 4000 K | 230 lm | 36° | 500 cd | 4.5 W | 220 - 240 V | > 80 | 25,000 h | GU10 | A+ |

Dimmable product: please see the compatibility list available on our webpage. www.toshiba.eu/lighting

## E-CORE MR16 7,5W

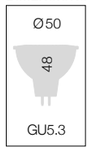
The new E-CORE MR16 7,5W despite its compact size offers 450 lm. It combines brightness and energy savings. As dimmable and available in different beam angles (up to 60°) it will convert itself into your best partner for any relamping projects with GU5.3 lamps.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

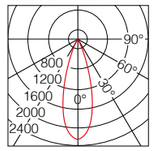
| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDM005A27M30DEU | 2700 K | 450 lm | 36° | 1.000 cd | 7.5 W | 12 V | > 80 | 25,000 h | GU5.3 | A |
| LDM005A27W30DEU | | | 60° | 500 cd | | | | | | |
| LDM005A30M30DEU | 3000 K | 450 lm | 36° | 1.000 cd | | 12 V | > 80 | 25,000 h | GU5.3 | A |
| LDM005A30W30DEU | | | 60° | 500 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDM005A40M30DEU | 4000 K | 450 lm | 36° | 1.000 cd | 7.5 W | 12 V | > 80 | 25,000 h | GU5.3 | A |
| LDM005A40W30DEU | | | 60° | 500 cd | | | | | | |

Dimmable product: please see the compatibility list available on our webpage. www.toshiba.eu/lighting
SELV 12V transformers: please see compatibility list at www.toshiba.eu/lighting

## E-CORE MR16 6,5W

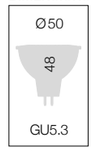
The new E-CORE MR16 6,5W lamp reachs 345 lm. As dimmable, it will replace easily any 35W halogen GU5.3 lamp and enables you to save up to more than 80% energy.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDM004A27M30DEU | 2700 K | 350 lm | 36° | 800 cd | 6.5 W | 12 V | > 80 | 25,000 h | GU5.3 | A |
| LDM004A30M30DEU | 3000 K | 350 lm | 36° | 800 cd | | 12 V | > 80 | 25,000 h | GU5.3 | A |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDM004A40M30DEU | 4000 K | 350 lm | 36° | 800 cd | 6.5 W | 12 V | > 80 | 25,000 h | GU5.3 | A |

Dimmable product: please see the compatibility list available on our webpage. www.toshiba.eu/lighting
SELV 12V transformers: please see compatibility list at www.toshiba.eu/lighting

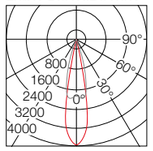
E-CORE LED Lighting

TOSHIBA
Leading Innovation

## E-CORE MR16 5,2W

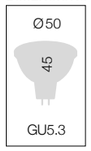
Thanks to the 40,000 hours that offers this lamp, it will suit any kinds of high maintenance application that include GU5.3 25 W halogen lamps.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

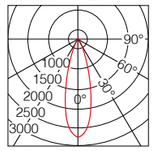
| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDRA0527MU5EU3 | 2700 K | 280 lm | 25° | • 1,200 cd | 5.2 W | 12 V | > 80 | 40,000 h | GU5.3 | A |
| LDRA0527WU5EU3 | | | 35° | • 650 cd | | | | | | |
| LDRA0530MU5EU3 | 3000 K | 290 lm | 25° | • 1,250 cd | | 12 V | > 80 | 40,000 h | GU5.3 | A |
| LDRA0530WU5EU3 | | | 35° | • 700 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDRA0540MU5EU3 | 4000 K | 300 lm | 25° | • 1,250 cd | 5.2 W | 12 V | > 80 | 40,000 h | GU5.3 | A |
| LDRA0540WU5EU3 | | | 35° | • 700 cd | | | | | | |

SELV 12V transformers: please see compatibility list at www.toshiba.eu/lighting

## E-CORE MR16 4,6W

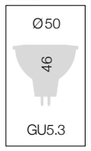
The E-CORE MR16 4,6W is the perfect replacement for halogen GU5.3 20W lamps. The different color temperatures will enable you to create the right lighting ambience your installation needs.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

**DIMMABLE**

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDM003A27M30DEU | 2700 K | 230 lm | 36° | 650 cd | 4.6 W | 12 V | > 80 | 25,000 h | GU5.3 | A |
| LDM003A30M30DEU | 3000 K | 230 lm | 36° | 650 cd | | 12 V | > 80 | 25,000 h | GU5.3 | A |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDM003A40M30DEU | 4000 K | 230 lm | 36° | 650 cd | 4.6 W | 12 V | > 80 | 25,000 h | GU5.3 | A |

Dimmable product: please see the compatibility list available on our webpage. www.toshiba.eu/lighting
SELV 12V transformers: please see compatibility list at www.toshiba.eu/lighting

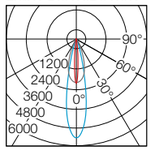
E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

## E-CORE AR111 14,5W

Thanks to the light quality, the light intensity and the beam angle variety, this range is the ideal solution to replace AR111 halogen lamps. It will convert any space into the most appealing one.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDREU002A27NA0 | 2700 K | • 810 lm | 8° | 16,000 cd | 14.5 W | 12 V | 80 | 40,000 h | G53 | A |
| LDREU002A27MA0 | | • 810 lm | 24° | 4,500 cd | | | | | | |
| LDREU002A27WA0 | | • 810 lm | 40° | 1,600 cd | | | | | | |
| LDREU002A30NA0 | 3000 K | • 860 lm | 8° | 16,700 cd | | | | | | |
| LDREU002A30MA0 | | • 860 lm | 24° | 4,700 cd | | | | | | |
| LDREU002A30WA0 | | • 860 lm | 40° | 1,700 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDREU002A40NA0 | 4000 K | • 920 lm | 8° | 17,900 cd | 14.5 W | 12 V | 80 | 40,000 h | G53 | A |
| LDREU002A40MA0 | | • 920 lm | 24° | 5,000 cd | | | | | | |
| LDREU002A40WA0 | | • 920 lm | 40° | 1,800 cd | | | | | | |

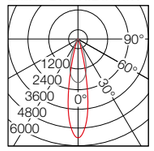
SELV 12V transformers: please see compatibility list at www.toshiba.eu/lighting.

E-CORE™ LED Lighting

## E-CORE AR111 10,5W

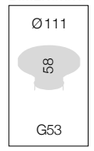
The AR111 pin-base lamps are in a class of their own in the low-voltage sector: pure luminosity for downlights, gimbal and catenary lights. Their potential for savings is also as eye catching as it is impressive.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDREU001A27MA0 | 2700 K | • 600 lm | 24° | 3,400 cd | 10.5 W | 12 V | 80 | 40,000 h | G53 | A |
| LDREU001A27WA0 | | • 600 lm | 40° | 1,200 cd | | | | | | |
| LDREU001A30MA0 | 3000 K | • 640 lm | 24° | 3,600 cd | | 12 V | 80 | 40,000 h | G53 | A |
| LDREU001A30WA0 | | • 640 lm | 40° | 1,300 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDREU001A40MA0 | 4000 K | • 690 lm | 24° | 3,800 cd | 10.5 W | 12 V | 80 | 40,000 h | G53 | A |
| LDREU001A40WA0 | | • 690 lm | 40° | 1,300 cd | | | | | | |

SELV 12V transformers: please see compatibility list at www.toshiba.eu/lighting.

TOSHIBA
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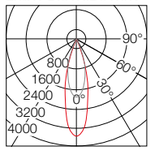
## E-CORE PAR38 18,8W

If you need even more light, then you can choose the E-CORE PAR38 18,8W. With 980 lm, its wide range of colour temperatures and a service life of up to 40,000 hours makes it a true all-rounder.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**

(mm)

**DIMMABLE**

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDRC1627ME7EUD2 | 2700 K | 950 lm | 25° | • 3,200 cd | 18.8 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC1627WE7EUD2 | | | 35° | • 1,650 cd | | | | | | |
| LDRC1630ME7EUD2 | 3000 K | 980 lm | 25° | • 3,300 cd | 18.8 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC1630WE7EUD2 | | | 35° | • 1,700 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDRC1640ME7EUD2 | 4000 K | 980 lm | 25° | • 3,300 cd | 18.8 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC1640WE7EUD2 | | | 35° | • 1,700 cd | | | | | | |
| **COOL WHITE** | | | | | | | | | | |
| LDRC1665ME7EUD2 | 6500 K | 980 lm | 25° | • 3,300 cd | 18.8 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC1665WE7EUD2 | | | 35° | • 1,700 cd | | | | | | |

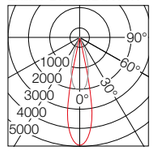
Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE™ LED Lighting

## E-CORE PAR30 14W

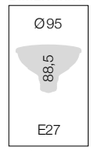
It can be used in almost all areas: Since you will receive the E-CORE PAR30 14W in warm white, neutral white and cold white. It can be dimmed and equipped with an E27 screw base to work as a high-voltage reflector lamp.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

**DIMMABLE**

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDRC1327ME7EUD | 2700 K | 770 lm | 23° | • 3,400 cd | 14 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC1327WE7EUD | | | 32° | • 1,500 cd | | | | | | |
| LDRC1330ME7EUD | 3000 K | 780 lm | 23° | • 3,400 cd | 14 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC1330WE7EUD | | | 32° | • 1,600 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDRC1340ME7EUD | 4000 K | 780 lm | 23° | • 3,400 cd | 14 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC1340WE7EUD | | | 32° | • 1,600 cd | | | | | | |
| **COOL WHITE** | | | | | | | | | | |
| LDRC1365ME7EUD | 6500 K | 780 lm | 23° | • 3,400 cd | 14 W | 220 - 240 V | > 65 | 40,000 h | E27 | A |
| LDRC1365WE7EUD | | | 32° | • 1,600 cd | | | | | | |

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

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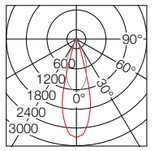
## E-CORE PAR20 9W

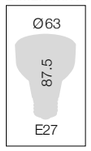
The E-CORE PAR range's performance class, beam distribution characteristics and light quality leave no lighting wish unanswered. With its high efficiency, it provides the suitable way in to contemporary room lighting.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

**DIMMABLE**

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | LUMINOUS INTENSITY | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LDRC0927ME7EUD | 2700 K | 370 lm | 25° | • 950 cd | 9 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |
| LDRC0927WE7EUD | | | 40° | • 450 cd | | | | | | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LDRC0940WE7EUD | 4000 K | 380 lm | 40° | • 460 cd | 9 W | 220 - 240 V | > 80 | 40,000 h | E27 | A |

E-CORE LED Lighting

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting



Commission Regulation
EU No 1194/2012

# The Ecodesign Directive

Europe is taking another step on the road to an energy-efficient future. With this purpose in mind, the EU issued the ErP Directive 2009/125/EC for energy-related products in 2009.

The Directive also outlines the changeover from non-directional lighting such as light bulbs for private use to energy-saving alternatives. Commission Regulation EU No 1194/2012 has been in force since September 1st 2013.

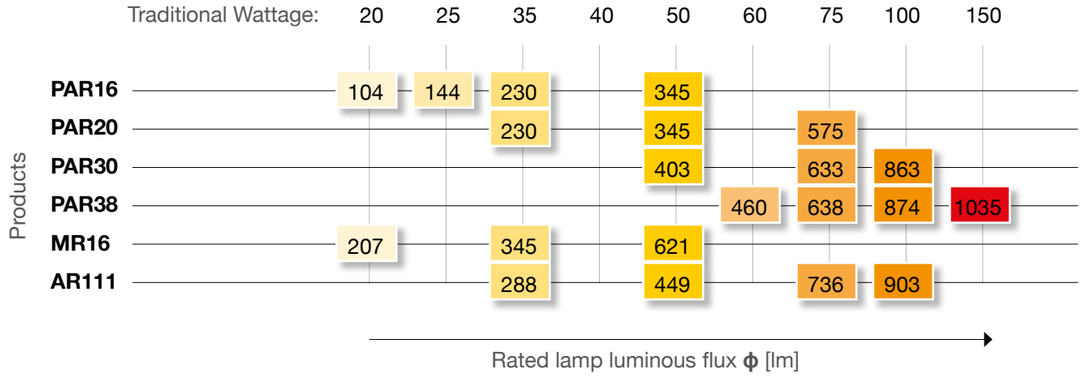
This Directive introduces regulations for lamps with directional light and comes along with a new one for lamp packaging (EU/874/2012). The focus of the ErP Directive is our environment and the best way to look after it.

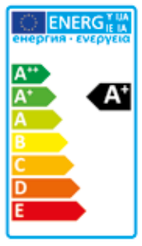
It is up to all of us to live up to this ambitious objective, which is why the EU is giving this responsibility to both consumers and manufacturers.

With its lamps, Toshiba is offering a range of products that is 100% ErP-compliant. All our products already hold the „greenest" energy efficiency ratings, A, A+ or A++.

Even though the consumer will have to get used to working with different units - lumens instead of Watts - the new Directive will make a considerable contribution to the ecological protection of our environment. We are pleased to be making this journey with you.

## Equivalence table for directional lamps




The energy efficiency label, in force since September 1st 2013, introduces the two new energy efficiency ratings A+ and A++. The older, lower classes F and G have been discontinued.

TOSHIBA
Leading Innovation

# Modules

## Optimal lighting conditions, minimal energy consumption.

In public spaces in particular, such as offices, presentation areas, and production sites, LED technology provides an important contribution to the environmental friendliness of your company. Here, Toshiba has just the right solution for every requirement – LED modules that can be easily integrated into your lighting system.

Depending on your requirements, these also come with dimmer drivers, allowing you not only to adjust your lighting conditions but also to optimise your heat management. No matter which solution you opt for, with our LED modules you not only provide the best possible lighting conditions for your company but also contribute to climate protection.

# E-CORE LED TUBE GX16t-5

## An innovation is conquering offices, presentation areas, and production sites.

Toshiba leads the field when it comes to environmental protection. So it is no surprise that the E-CORE LED TUBE GX16t-5 impress through top performance and are competitively priced.

It‘s the ideal time for a switch-over – don‘t you think?



## Every feature of the E-CORE LED TUBE GX16t-5 represents a good investment:

- Their 40,000-hour lifespan is double that of conventional fluorescent lamps.
- An external LED driver ensures especially high performance.
- The modules can be easily integrated into your existing lighting system.
- They impress thanks to an approximately 1.7 x greater lumen output than conventional LED lamps with integrated drivers.

## THE LED evolution for professionals.

The E-CORE LED TUBE GX16t-5 are more than just a competitively priced entry-level model. Their output and optimal performance are just as impressive as other innovative LED concepts from Toshiba. And because their fittings are identical to those of conventional fluorescent lamps, using them is particularly easy.

Do you wish to present your sales area in an impressive way? This is also easily achieved with the E-CORE LED TUBE GX16t-5, because they are available in all lengths and a great variety of colours.

The choice is yours! Choose modern LED technology that is durable, highly efficient, and that features full luminance immediately after being switched on.

External LED driver

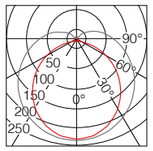
E-CORE LED Lighting

TOSHIBA
Leading Innovation

## E-CORE LED TUBE GX16t-5

The E-CORE LED TUBE GX16t-5 is the perfect linear module to upgrade the linear fluorescent fixtures to LED. This module  has been designed for manufacturers willing to implement LED technology at an affordable cost. Available in all lengths and many colour temperatures of traditional linear lamps, it enables to keep the same fixture bodies and makes the switch to LED very easy. As it works with a separated Toshiba driver, the light flux can be dimmed and it prevents from many disadvantages of other solutions like heat management or over load risks.

**LIGHT DISTRIBUTION**

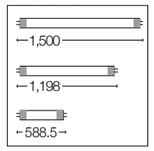



(cd/klm)

**DIMENSIONS**

(mm)

**DIMENSIONS**




(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | DIAMETER (mm) | SIZE (mm) | ENERGY LABEL |
|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | |
| LDL82D1530X1EU | 3000 K | 1,550 lm | 14.5 W | 45 - 190 V | 83 | 40,000 h | 26.7 | 588.5 | A+ |
| LDL84D2830X1EU | 3000 K | 3,100 lm | 28 W | 45 - 190 V | 83 | 40,000 h | 26.7 | 1,198 | A+ |
| LDL95D3630X1EU | 3000 K | 3,800 lm | 36 W | 90 - 190 V | 83 | 40,000 h | 28.8 | 1,500 | A+ |
| **NEUTRAL WHITE** | | | | | | | | | |
| LDL82D1540X1EU | 4000 K | 1,650 lm | 14.5 W | 45 - 190 V | 83 | 40,000 h | 26.7 | 588.5 | A+ |
| LDL84D2840X1EU | 4000 K | 3,300 lm | 28 W | 45 - 190 V | 83 | 40,000 h | 26.7 | 1,198 | A+ |
| LDL95D3640X1EU | 4000 K | 4,000 lm | 36 W | 90 - 190 V | 83 | 40,000 h | 28.8 | 1,500 | A+ |
| **COOL WHITE** | | | | | | | | | |
| LDL84D2865X1EU | 6500 K | 3,350 lm | 28 W | 45 - 190 V | 83 | 40,000 h | 26.7 | 1,198 | A+ |
| LDL95D3665X1EU | 6500 K | 4,000 lm | 36 W | 90 - 190 V | 83 | 40,000 h | 28.8 | 1,500 | A+ |

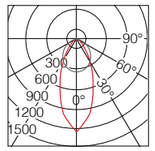
Working on seperated driver: LEK-3301CA02, LEK-3301CA02D, LEK-330S02CA02, LEK-330S02CA02D
Please see connection details at www.toshiba.eu/lighting

E-CORE™
LED Lighting

## E-CORE GX53-1

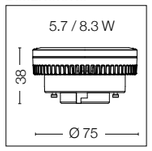
This LED MODULE is compact and offers a great light output. Use this module with GX53-1 socket in your creations and get an economical and sustainable light source.

**LIGHT DISTRIBUTION**




(cd/klm)

**DIMENSIONS**




(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE |
|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | |
| LDFEU009C27M50D | 2700 K | • 510 lm | 40° | 5.7 W | 220 - 240 V | 80 | 40,000 h | GX53-1 |
| LDFEU009C27W50D | | • 510 lm | 100° | | 220 - 240 V | 80 | 40,000 h | GX53-1 |
| LDFEU010C27M50D | 2700 K | • 700 lm | 40° | 8.3 W | 220 - 240 V | 80 | 40,000 h | GX53-1 |
| LDFEU010C27W50D | | • 700 lm | 100° | | 220 - 240 V | 80 | 40,000 h | GX53-1 |
| **NEUTRAL WHITE** | | | | | | | | |
| LDFEU009C40M50D | 4000 K | • 550 lm | 40° | 5.7 W | 220 - 240 V | 80 | 40,000 h | GX53-1 |
| LDFEU009C40W50D | | • 550 lm | 100° | | 220 - 240 V | 80 | 40,000 h | GX53-1 |
| LDFEU010C40M50D | 4000 K | • 750 lm | 40° | 8.3 W | 220 - 240 V | 80 | 40,000 h | GX53-1 |
| LDFEU010C40W50D | | • 750 lm | 100° | | 220 - 240 V | 80 | 40,000 h | GX53-1 |

TOSHIBA
Leading Innovation

# Toshiba LED LIGHT ENGINE

## A revolutionary new LED light source designed around the LED to maximise performance and efficiency

LED LIGHT ENGINE enables you to make choices with your lighting, and change your mind later.

This interchange ability allows you to extend the possibilities of your lit space and easily change the look and feel of the room depending on what you are lighting.

LIGHT ENGINE is a lamp in the traditional sense of the word.

- **You don‘t need to attach a driver.**
- **You don‘t need to add optical controls.**

## Concept

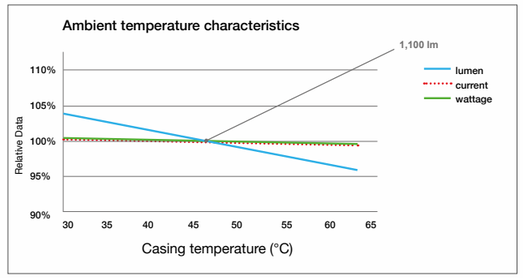
LIGHT ENGINE from Toshiba has been designed as an evolution to conventional lighting to maximise the potential of LED and provide long life, high efficiency, instant light and higher luminous flux.

LIGHT ENGINE is a new generation of replaceable light sources, using LED. Just as you would replace your fluorescent tube, the LIGHT ENGINE too can be replaced or exchanged. This means that you do not have to replace the entire luminaire should the LED fail but simply untwist the old lamp and replace it.

## Design for Life and Efficiency

Without effective thermal management, LEDs will not operate well and could fail prematurely or operate inefficiently. The LIGHT ENGINE has been designed to take all that worry off your shoulders.

With its 40 mm cross-sectional silicon heat pad, the LIGHT ENGINE ensures that all the heat generated is driven directly to the heatsink, away from the LED chip.




Note: The values above is the relation of Tc and engines´s specifications where the product is turned on the following conditions:
· the input voltage is 230 V
· base-up positioned

LIGHT ENGINE uses a special connector that presses the LIGHT ENGINE‘s silicon heat pad down with exact pressure to the heatsink to ensure a good thermal connection with no air gaps.

LIGHT ENGINE offers 40,000 hours of life (L70), that‘s up to 4 times longer than CFL, dramatically reducing maintenance costs.

Delivering 91 lm/W, the LIGHT ENGINE offers high light output without draining your wallet. Combined with its dimming capabilities, the LIGHT ENGINE is the perfect choice for efficient, flexible, low energy lighting.

## Reduce Investment Risk

TOSHIBA LED LIGHT ENGINE is a future-proof solution. Indeed through this engine, we created a new standardized socket: GH76p-5.
Thus, the LED engine becomes a lamp allowing end-users to upgrade their luminaires with the latest technology.

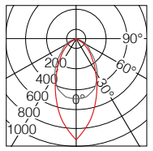
E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

## E-CORE LED LIGHT ENGINE 2

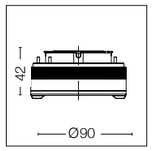
The unusual LED LIGHT ENGINE 2 from Toshiba offers creative users unlimited opportunities for a large number of lighting solutions. Depending on the application, you have a choice between different beam angles and luminous fluxes. The LIGHT ENGINE 2 is easy and safe to assemble.

LIGHT DISTRIBUTION



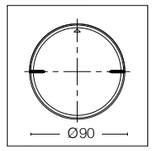

(cd/klm)

DIMENSIONS




(mm)

DIMENSIONS



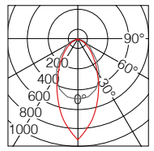

(mm)

| | COLOUR TEMPERATURE | LUMINOUS FLUX | USEFUL OUTPUT | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | DIMM-ABLE |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LEV112313M830E | 3000 K | • 1,020 lm | • 765 lm | 50° | 12.7 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | No |
| LEV112313W830E | | • 1,020 lm | • 690 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318M830E | | • 1,480 lm | • 1,110 lm | 50° | 17.5 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318W830E | | • 1,480 lm | • 965 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324M830E | | • 2,040 lm | • 1,465 lm | 50° | 24 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324W830E | | • 2,040 lm | • 1,285 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LEV112313M840E | 4000 K | • 1,100 lm | • 825 lm | 50° | 12.7 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | No |
| LEV112313W840E | | • 1,100 lm | • 745 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318M840E | | • 1,600 lm | • 1,200 lm | 50° | 17.5 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318W840E | | • 1,600 lm | • 1,045 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324M840E | | • 2,200 lm | • 1,580 lm | 50° | 24 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324W840E | | • 2,200 lm | • 1,390 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |

## E-CORE LED LIGHT ENGINE DALI

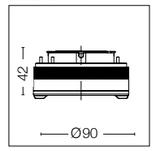
The LED LIGHT ENGINE from Toshiba is the perfect module to development LED downlight systems and to adapt them to all the application requirements thanks to the wide range and the DALI dimming capability.

LIGHT DISTRIBUTION



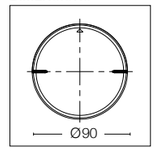

(cd/klm)

DIMENSIONS




(mm)

DIMENSIONS




(mm)

DIMMABLE

| | COLOUR TEMPERATURE | LUMINOUS FLUX | USEFUL OUTPUT | BEAM ANGLE | WATTAGE | VOLTAGE 50/60 Hz | Ra (min) | LIFESPAN (L70) | BASE | DIMM-ABLE |
|---|---|---|---|---|---|---|---|---|---|---|
| **WARM WHITE** | | | | | | | | | | |
| LEV112313M830ME | 3000 K | • 1,020 lm | • 765 lm | 50° | 12.9 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | 0 / 5-100% |
| LEV112313W830ME | | • 1,020 lm | • 690 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318M830ME | | • 1,480 lm | • 1,110 lm | 50° | 17.8 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318W830ME | | • 1,480 lm | • 965 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324M830ME | | • 2,040 lm | • 1,465 lm | 50° | 24.2 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324W830ME | | • 2,040 lm | • 1,285 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| **NEUTRAL WHITE** | | | | | | | | | | |
| LEV112313M840ME | 4000 K | • 1,100 lm | • 825 lm | 50° | 12.9 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | 0 / 5-100% |
| LEV112313W840ME | | • 1,100 lm | • 745 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318M840ME | | • 1,600 lm | • 1,200 lm | 50° | 17.8 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV162318W840ME | | • 1,600 lm | • 1,045 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324M840ME | | • 2,200 lm | • 1,580 lm | 50° | 24.2 W | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |
| LEV222324W840ME | | • 2,200 lm | • 1,390 lm | 80° | | 220 - 240 V | > 80 | 40,000 h | GH76p-5 | |

DC capability: Yes

# DIMMABILITY

### Dimming of lights

DIMMABLE

LED lights can be dimmed without sacrificing light quality. This is the main difference from lights fitted with fluorescent or high-pressure discharge lamps. Dimming also saves more energy. There are different types of dimming.

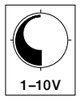
### DALI

DIMMABLE

Luminaires are controlled by the digital DALI (Digital Addressable Lighting Interface). This standard, adopted by all manufacturers, overcomes the disadvantages of the 1 – 10 V principle and is being used increasingly, particularly in more complex installations. DALI offers a two-wire line that is protected against polarity reversal, with noise-resistant digital signal transmission, direct addressability, compact instruction set, error feedback and defined brightness values which are independent of line length. DALI is also supported by building and light management systems.

### 1 – 10 V

DIMMABLE




Luminaires can be dimmed via the 1 – 10 V interface. A voltage level between 1 V and 10 V is converted into corresponding lamp brightness.

### Phase control

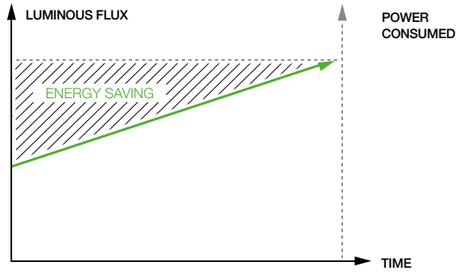
Phase control widely used for incandescent and halogen lamps dimming this analogic control method apply also to LED lamps. Because there is no general compatibility between all dimmers available on the market, Toshiba has provided a list of recommended dimmers on its website www.toshiba.eu/lighting.

# CONSTANT LUMEN OUTPUT

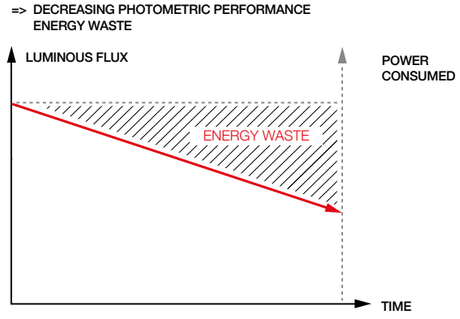
### Constant luminous flux over the life of the lamp

The drop in luminous flux due to the LED technology over the service life of the system is compensated by increasing the power input. This results in constant and uniform photometric performance differentiating strongly TOSHIBA products from standard LED systems whose lumen output drastically drops over time lighting.

WITH CONSTANT LUMEN OUTPUT
=> STABLE PHOTOMETRIC PERFORMANCE
OPTIMUM POWER CONSUMPTION




WITHOUT CONSTANT LUMEN OUTPUT
=> DECREASING PHOTOMETRIC PERFORMANCE
ENERGY WASTE



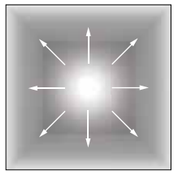





### Basic Photometric Units

There are several photometric base quantities in the definition of light sources, which characterise different qualities.

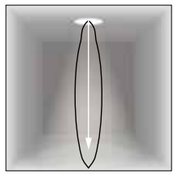
LUMINOUS FLUX (Phi/lm)



**Luminous flux ϕ in lm (Lumen)**

The total radiating power emitted by a light source, which the eye perceives as light.

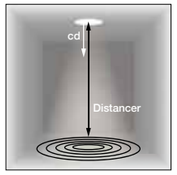
LUMINOUS INTENSITY (I/cd)



**Luminous intensity I in cd (candela)**

The luminous flux of a light source per solid angle. With the same luminous flux, the light intensity increases the more the light source focuses the light.

ILLUMINANCE (E/lx)




**Illuminance E in lx (Lux)**

A measure of lighting power per lit surface. A minimum luminance is specified for many visual tasks and must be considered in the planning of the visual task and choice of light source.

### Colour Rendering Index Ra

Colour Rendering Index (CRI) is a measure of how well a light source is able to accurately reproduce colours of objects being lit respective to the colour temperature (CCT) of the light source. The higher the colour rendering index, the more naturally the colours of an object are reproduced and therefore perceived by the observer. The sun has the highest CRI of 100. Most artificial light source are below that. The colour rendering index is determined using 8 standardised test colour references.

### Dimmability by trailing edge phase control

DIMMABLE

Luminaires can be dimmed very easily using trailing edge phase control. The advantage of trailing edge phase control compared with circuits in which the voltage is controlled by a resistance is that they have a very low power loss and are widely used in existing installations. The main disadvantage of trailing edge phase control is the non-sinusoidal current profile. Because current and voltage do not have the same shape, so-called distortion reactive power occurs. Shifting the current backwards compared with the voltage curve has the same effect as an inductive load, which electricity supply companies can only tolerate at low power levels. Leading edge phase control is not recommended for Toshiba lamps. Because there is no general compatibility between all dimmers available on the market, Toshiba has provided a list of recommended dimmers on its website www.toshiba.eu/lighting.

### Colour temperature (K Kelvin)

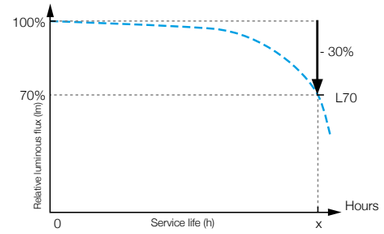
Colour temperature is a measure of the colour effect of a light source. Colour temperature is defined as the temperature of a black body which belongs to a particular light colour of this emission source.
Typical colour temperatures for light sources are:

- below 3300 K = warm white, preferred for interior lighting
- 3300 K to 5300 K = neutral white, typical light colour for office, industrial and exterior lighting
- above 5300 K = cool white, especially common in exterior lighting.

### L70 service life of LED light sources

LEDs are characterised by their excellent service life. Because LEDs hardly ever fail completely, the service life is defined as having an L70 value. Their useful life is considered to be over when the luminous flux has dropped to 70% of the initial luminous flux. After this time the LEDs age at a dramatically accelerated rate.
The service life of an LED light source is not set by the LEDs alone, the other electrical components and the thermal design are also a factor. Therefore the given service life varies from product to product.

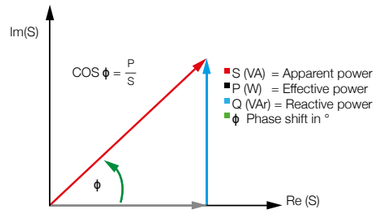
AGEING OF LED LAMPS




### Power factor λ = cos ϕ

The LED light sources need driver modules to operate which act capacitively from an electrical point of view. This leads to a phase shift between voltage and current consumption and consequently the apparent power S (given in Volt Amperes VA) has an effective power proportion P (Watts) and a reactive power Q (Volt Ampere reactive VAr). The relationship between effective power P and apparent power S is represented as the power factor λ.

VECTOR DIAGRAM OF APPARENT POWER S




Product specifications and configurations, and availability of products are subject to change. Variations in product design and product features are subject to change. Colours may vary from illustration. Errors and omissions excepted.
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TOSHIBA

Leading Innovation

## www.toshiba.eu/lighting

Specifications and design as of november 2014.
Specifications and design may change without further notice.

PP_ENG_10/14

E-CORE™
LED Lighting